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ABSTRACT

A translation of parts of a Swedish study conducted in 73 full-day and 42 part-day Swedish preschools is presented. Although official Swedish policy maintains that the two types of preschool should have the same social and educational goals, Swedish public opinion holds that full-time preschools are mainly caretaking schools, and part-time preschools are more educational. The study reported in this document involved observations of the activities, language, and groupings of 559 children of 5-6 years of age. Categorizations were made according to the principles used in the Oxford Preschool Research Study (1980). Results showed that there was more social play and social interaction without play in full-time than in part-time preschools, and that part-time preschools had more goal-oriented and traditional activities. More system stress, such as large group size, problem children, and high staff turnover, was connected to a less goal-oriented structure in full-time preschools, and the opposite was true in part-time preschools. About the same amount of time (60 to 70 minutes) was devoted to structured educational activities daily in both forms of preschool. Contains about 100 references from English language and Swedish sources. (LB)

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Reports from the Department of Education and Educational Research

22.000 MINUTES IN PRESCHOOL

5-6 year old children´s activities, language and group constellations in Swedish preschools

Gunni Kärrby

PS 020250

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INTRODUCTION

In a National Commission on Child Care presented by the government in 1972 the charters of the modern Swedish preschool was formulated. In this document of about 1000 pages, the structure, organization and content of full time (day care centers) and part time (3 hours a day) preschools were described. Statements were made as to the size of children´s groups, staff/child ratio, age composition in the groups, professional training of the personnel, etc.

In contrast to earlier governmental documents and propositions regarding child care, the Commission also presented an educational philosophy and theories on child development that were supposed to be the base for the educational work in both full time and part time preschools. Historically, day care and part time preschools (Kindergarten) had different functions, day care centers being mainly care giving institutions and Kindergarten being based on an educational philosophy. According to the Commission both kinds of preschools should from this on have the same educational goals. Instead of being based on learning principles the total development of the child should be considered. The social and emotional development of the child should be as important as intellectual development. Educational practise was to be based on the theories by Eric Homburger-Ericson, Jean Piaget and G H Mead. An educational concept was introduced, "dialogue pedagogic", by which the communication between the child and the adult was emphasized. Children´s own experiences should be the starting point of the educational content and the child´s own initiative the base for educational activity. The personal relationship between the child and the personnel was as important as organized learning situations.

From the middle of the 70ies there was a rapid expansion of full time preschools. At the same time a law was passed implying that a place was guarantied for all 6 year olds in part time preschools. The educational function of these was thus accentuated while the full time preschools were regarded as centers for care and supervision of children to working mothers. In the public discussion these different images of the two forms of preschool were prevalent. In public opinion as well as among parents and even preschool personnel there was a negative view on the day care center as an educational institution in spite of the research results presented giving a positive picture of the day care center as to its qualitative standard.

The present study was initiated in an effort to find out what actually happened in the two forms of preschool. Are day care centers just custodial institutions where the children are only being cared for? Are the public critics right who maintain that children are just "roaming around doing nothing"? My main research question was: How do the two forms of preschools differ as to educational planning, activity and content?

In this kind of evaluative research a "soft data" approach was considered. Observations of the children were regarded as a suitable method in order to find out what was happening to the children. At that time a similar problem was of great concern in Britain. A research group headed by Jerome Bruner had started a number of preschool research projects (Bruner 1980). Among these the Oxford Preschool Research Project was seen as a model for my own research. Their report CHILD WATCHING AT PLAYGROUP AND NURSERY SCHOOL by Sylva, Roy and Painter was published in 1980. In 1982 I contacted Kathy Sylva who was employed at Oxford university at that time. The observation method, design of the study and categorization of activities, language and group constellation were discussed and found suitable for my own purpose. The categorizations were translated and used in the same way as in the study in Oxfordshire. The Swedish study is thus a replica of the British one. The results can therefore be compared in an exact way.

As the Swedish study is based on a large sample (559 children) it has been possible to test a number of relationships between different organizational factors and child observations that was not possible in the British study. The results from the Swedish study thus contribute to scientific knowledge about the relationship between organizational and educational factors. It has also been possible to use sex and form of preschool as independent variables. Interesting covariations are found between these and communication pattern.

Three separate papers are published in connection with the presented report:

Time structure and sex differences in Swedish preschools. Early Child Development and Care. Vol 39, 1988, pp 45-52

Comparison between Swedish and British preschools of children's activities, language and group constellation. Paper presented to the 5th Early Childhood Convention, Dunedin, New Zealand, 8-12 sept 1991.

Differences in quality and extent of daily time in Swedish preschools Paper presented at the European Conference on Defining and Assessing Quality in the education of children from 4-7 years, Leuven, Belgium, 25-27th September 1991.

The following report is a translation of chapters 7 to 10 of a Swedish report: 22.000 minutes in preschool, 5-6 year old children's activities, language and group pattern in preschool. The Swedish report consists of three parts. Part one (chapters 1 to 4) treats background factors, part two (chapters 5 to 7) takes up the aims of the study, theory and method and part three (chapters 8 to 11) describes the results. The data were collected in 1984 and the report was published in 1986 (Report nr 1986:09, Department of Education and Educational Research, Gothenburg university).

The last chapter in the Swedish version, Planning and direction of activities in preschool has not yet been translated but will be published in a separate paper.

A short summary of each of the chapters that have not been translated will be given here.

In the first chapter the role of the preschool in society is taken up. Political documents are analyzed that show how the function of particularly the full time preschool has changed from being mainly provions for care while part time preschools by tradition have had an educational function. The development of particularly full time preschools in Sweden has been rapid from the 60ies until today. The political function of these was mainly to liberate women labour but later there was a strong stress on arguments based on the equality between men and women. From the middle of 1970 a law was passed that guarantied all 6 year old children a place in preschool. Ten years later an educational program for preschools was accepted by the Parliament. The Swedish preschool is compared to preschools in other countries.

In chapter two the educational environment of the preschool is treated. Swedish and international studies concerning the effects of going to preschool compared to being at home or in other forms of child care are described. Studies on the interaction between the social home environment and attending preschool are also taken up. Evaluational research done on particularly full time preschools in Sweden is summarized.

Research on the policy, administration and organization of preschools is treated in chapter 3. Relationships between provision of places and the function of the preschool is analysed. Priority policy, the planning of preschools and staff policy in different municipalities are described. International research on the effects of group size, staff/child ratio and age composition of the children´s groups is presented in this chapter.

In chapter 4 the educational structure and planning of the work by the staff are treated. The conceptual meaning of the term structure is discussed in relation to preschool pedagogics. Distinctions are made between group structure, adult led activity, direct and indirect instruction. The term structure is seen in relation to quality. The analysis of structure is made in relation to the use of this concept in the Oxford Preschool Research Study led by K Sylva (Sylva et al 1980). The definition of structure in the present study is described.

The aims and design of the study are treated in chapter 5.The primary aim of the study was to describe and analyse the educational content, form and structure in full time and part time preschools and to make comparisons between these.

The second aim was to study the relationships between frame factors and the educational content, form and structure in the preschool.

The design of the study is based on an ecological approach and discussed in relation to anthropological perspective and related to the ethological approach that was used in the Oxford Preschool Research Study.

The different levels of the frame factors consist of 1) administrative conditions, 2) institutional conditions, 3) staff conditions and 4)educational structure. The frame factors are treated as independent variables and the observations of children´s activities, social group constellation and language are treated as dependent variables.

The theory and method are treated in chapter 6. The concept of activity is analyzed and the theory developed by J. Bruner is compared to similar theories developed by Scandinavian researchers like Enerstvedt. The principles for the categorization of the observations are described. In the corresponding study in Britain a method for the rating of challenge was developed. Due to shortage of resources a rating of challenge was not made in the Swedish study.

In chapter 11 the observations of the daily schedule in the preschool is described. Like in the Oxford study, in every 15 minutes a notation was made of the on-going activities. These were rated as to regularity, planning and degree of adult direction. The number of present children was also noted and the number of adults who took part in the different activities. A factor analysis was done on the data and three different dimensions could be separated: 1) Activity level, 2) Large group activity led by adults and 3) Type of direction. Factors 1 and 2 were constituted by the same variables in full time and part time preschools while factor 3 consisted of different variables in full time and part type preschools indicating differences in their closeness to a school-like pattern. The different factors were correlated to the frame factors and to the children´s observations.

The English version of the Swedish report is introduced by a chapter on Swedish preschools describing the provision and forms that exist in Sweden today.The methods for collecting the data is described in chapter two. The next three chapters contain a translation of the results of the study.

The study was done as a research project financed by The Commission for Social Research at the Ministry of Health and Social Affairs, Sweden.

SUMMARY OF THE SWEDISH VERSION

GUNNI KÄRRBY. 22.000 MINUTES IN PRESCHOOL. 5-6 YEAR OLD CHILDREN'S ACTIVITIES, LANGUAGE AND GROUP PATTERN IN PRESCHOOL.

Report from Department of Education and Educational Research, University of Gothenburg, Sweden, 1986:09

Number of pages: 333
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BACKGROUND

According to Swedish child care policy, the preschool is one of our most important social institutions to support children's learning and development.

The Swedish preschool has both a social and educational function. It has two organizational forms, full time preschool (day care) and part time preschool. The traditional conception is that the full time preschool mainly has a social function while the part time preschool has an educational function This question is discussed in chapter 1. Swedish and foreign research on the preschool as an educational environment and its effects on children's development are given in chapter 2.

Those steering factors that are supposed to have most influence on the educational work in preschool are conditions on political and administrative level such as provision, staff policy, etc., the social background of the children and the educational structure. These factors are treated in chapter 3 and 4.

In part two, the aim of the study, theory and methods are treated. The main goal of the study is to investigate the preschool as an educational system. The main aims are

1) To describe the children's activities, language and group pattern

2) To describe those conditions of staff and institutional policy that are assumed to influence the educational work

3) To describe the educational structure in the form of teacher direction

4) To analyze the relations between the different levels.

5) To make comparisons between full time and part time preschools

THEORY

The study is based on the theories of the learning and development of children developed by J Bruner. The same categorization of the children's activities, language and group pattern is used as in the Oxford Preschool Research Study directed by J Bruner.These categories are constructed to reflect the interaction between the child's needs and conditions in the environment and include both the aims and strategies the child develops in order to learn to cope with the environment.

METHODS

Individual observations of 5-6 year old children have been made in 72 full time and 43 part time preschools. In each preschool observations have been made during 20 continuous minutes during different times in the day of five randomly chosen children The activities, language and group pattern were registered according to the system described in CHILD WATCHING AT PLAYGROUP AND NURSERY SCHOOL by SYLVA, ROY AND PAINTER (1980).

Altogether 559 children were observed in 19 municipalities on the Swedish west coast. Half of the preschools were situated in the city of Gothenburg.

Information about the staff/child ratio, working conditions of the staff, the size of the preschool, the social character of the living area, fees, etc were collected by a questionnaire.

The educational structure was studied by observation of the daily schedule during two half days. The planning, direction and regularity of the activities were judged on a 3-graded scale.

The study comprises about 22.000 minutes of preschool activities, language discourse, and group constellations. These were treated as dependent variables, and information of a number of frame factors were treated as independent variables. The data have been statistically analyzed mainly by frequency comparisons, correlations and variance analysis methods.

MAIN RESULTS

The results show that in relation to the time spent in preschool there is more social play and social interaction without play in full time compared to part time preschools. In these there are more goal oriented, regular and traditional educational activities. The relative amount of fantasy play is the same.

Altogether about the same time (60-70 minutes) is devoted each day to structured educational activities in both forms of preschool.

Activities are more regular and planned in part time than in whole time preschools.

Comparisons between girls and boys show that boys in part time preschools talk more and get more attention while the opposite is true in full time preschools, a result which is also found in schools.

Group size and staff/child ratio effect the amount of communication between the child and the adult but show no relationship to activity and group pattern

More "system stress" like larger group size, less staff/child ratio, more problem children and high staff turnover is connected to a less goal oriented structure in full time preschools while the opposite is true in part time preschools. A less goal oriented structure is also found in areas with low provision of places in full time preschools.

Factor analysis of observational data resulted in the following factors:

I Adult vs child orientation

II Group vs individual orientation

III Language vs material orientation

IV Split-up activity, passivity (one-dimensional factor)

Factor analysis of the educational structure measured through observations of the daily schedule showed the following factors:

I Level of activity

II Staff directed large group and regular activity

III Planning, variation and staff directed activity.

Factors I and II were constituted by the same variables in full time and part time preschools. Factor III was mainly constituted by different variables in the two forms of preschool.

CHAPTER 1

PUBLIC CHILD CARE IN SWEDEN

INTRODUCTION

In 1985 the Swedish Parliament (Riksdagen) voted in support of a proposal from the Social Democratic Government that by 1991 all children between the ages of 1 1/2 to 6 years have the right to a place in public child care, if their parents worked or studied, and if the families so wanted. If this goal is reached, and time has yet to tell, it represents the completion of a National Child Care Program which started on a more organized level in the early sixties, when women entered the labour-market in increasingly large numbers, hereby creating a need for child care outside of the home.

The form, content, and financing of the comprehensive child care program have been widely discussed by politicians, administrators and parents during this thirty-year period (and continues to be discussed), but two stabilizing factors which seem to have been particularly important to the development of the program are the fact that child care policies have been closely linked to other family support policies, such as financial support to families with young children (child allowances, rent subsidizes), parental leave programs, public health care, etc., and the fact that the Social Democratic Party has formed the government during all but six of these thirty years (the exception being the period between 1976-1982) allowing this party to put its ideas into action in ways which had not been possible had the political situation been more unstable.

THE DIFFERENT FORMS OF PUBLIC CHILD CARE

Fulltime care for preschool age children is provided in day care centers or full time preschools for children whose parents work or study, or children judged to be in "need for special support". Day care centers are usually open weekdays from 6.30 a.m. until 6.30 p.m., with some local variations. Most children spend seven to ten hours per day in the center. The Parent Cooperative Center is a recent variation of fulltime, state-subsidized center care in Sweden. Parental involvement and participation are the cornerstones in this type of child care.

Fulltime care is also provided in public Family Day Care Homes where the family day care mother takes care of children aged 0-12, in her own home, when the parents are working or studying. The children spend varying parts of the day in the family day care home, sometimes also evenings or weekends, if parent working-schedules include "odd hours". Another alternative is the "Three-family system", which is formally classified as a family day care home. In this alternative, a children's nurse is hired to take care of 3 or 4 children in the home of one of the three participating families.

Part-time preschools (kindergartens) are intended for children in the 4 to 6 age-span. All Swedish municipalities are required to provide this type of part-time preschool experiences for their 6-year olds.4 and 5-year olds are accepted into the programs when places are available. The children usually spend 3 hours per day, 5 days a week in the part-time preschools. .

After-School Homes ("Fritidshem") are open to children 7-12 years of age, whose parents are working or studying. Children enroled in this program spend parts of the day when they are not in school in the After-school home, and they also come here during the school holidays. Due to shortage of places, in many municipalities only 7-9 year olds are eligible for this type of care.

"Open Preschools" are available to those preschool aged children, and their parents or family day care mothers, who are not enroled in other forms of public child care. The municipality provides space, equipment and a preschool teacher to assist the parents, who are staying home taking care of their children.Parents can also meet other parents in the same situation, and thus make it easier for children to find playmates. Open preschool provide opportunities for private or public family day care mothers to get together and share their experiences, or ask the pre-school teacher for advice. Parents or family day care mothers don't have to sign up for participation in the open pre-school, they can drop in with their children at their own convenience, but they are not allowed to leave the children in the setting. They are accepted to stay and participate in the activities taking place in the open pre-school.

SWEDISH CHILD CARE STATISTICS

Table 1. Number and percentages of children aged 0-6 in various forms of child care 1987.

Type of care	No. of children	Perc. of children
Public child care	**322 900**	**47%**
Day care center	204 200	30%
Family day care	118 700	17%
Private child care	**362 100**	**53%**
Home care	293 700	43%
Out-of home care	68 400	10%

As indicated in Table 1, forty-seven percent of all children under age of seven are in full-time public child care, two cases out of three in a public day care center. Of the remaining 53%, a large majority (43%) is taken care of at home by one of the parents (usually the mother) and 10 % are taken care of in some private out-of-home arrangement (private family day care, relatives). Open preschools are set up in all municipalities in Sweden but are most common in urban districts.

Table 1 shows the distribution across different types of child care for all children under the age of seven. But the goal of the government is to provide public child care to those children "whose parents work or study". When only those whose parents work or study are included in the statistics, we find that **61%** are in public child care, **11%** are in care outside of the home, but not in public care, and **28%** are cared for in their homes by their parents. This last group also includes those 6-year olds who don't have a place in fulltime child care, but who participate in part-time preschool (kindergarten) 3 hours per day, 5 days per week. It also includes those infants taken care of in the home by their parents following the paid parental leave rights. When fully adopted in 1991, the Paid Parental Leave Act will allow the mother or the father to stay home with the new family member for a period of 18 month, with 90% of the parent's normal salary paid by the state.

It is also worth pointing out that (a) the older the child the higher is the probability that he or she will be in a day care center, as compared to a family day care home, and (b) large urban areas have considerably more places available in public day cares centers than family day care homes, whereas the reverse attend to be true in rural and sparsely populated areas.

PERSONNEL AND EDUCATION

Four different types of personnel are employed in the Swedish public child care settings. Pre-school teachers, nursery nurses, and family day care mothers are hired by the local authorities to take care of children in day care centers, part-time preschools, open pre-schools, and family day care homes; "leisure-time pedagogues" are working with the 7-12 year olds in afterschool centers. The educational background and training vary among these four groups of staff-members, as do the settings they are working in, and their professional responsibilities.

The Pre-school teacher completes a 2 1/2 year college-level educational program, which combines practical field-work in centers and part-time pre-schools with theoretical courses focussing mainly on early child development, family sociology, teaching methods, arts and crafts. Most students are accepted to basic training at the age of 18 or 19, directly from the Swedish "Gymnasium" (High School), having completed 11 or 12 years of schooling. Students are also accepted who have worked for several years as nursery nurses before they start their preschool teacher training. These students are usually exempted from practical field-work requirements, and get their preschool teacher certificates after about one year of theoretical course work. After graduation, the preschool teachers are hired to work in day care centers, parent cooperative centers, part-time preschools or open preschools. They are more likely to work with the 3-6 year old children than with the 0-3 year olds, and they often find themselves working in teams with nursery nurses, the other major staff category in these settings.

Nursery nurses get their education in the Swedish secondary school, which has a nursing program as one of it's two-year tracks. In addition to offering compulsory courses in mathematics, language and social sciences, this program, which combines theory and practice, gives the students the basic skills in childnursing and developmental psychology, and entitles the students to work in both full time and part time pre-schools. On the average, the salary of a nursery nurse is about 90% of the salary of a pre-school teacher. It is worth pointing out that the present training program for nursery nurses is fairly new, which means that many of the nurses working in the child care settings have had a somewhat different training, usually a one-year vocational-school program, directed specifically toward the nursing profession.

Some children's nurses might find themselves working in the homes of parents with young children, as part of the recently developed "three-family system" (see above). Public child care in home-settings "away from home" is also provided by municipal family day care mothers, of which there were approximately 34 000 in 1985. There is no centrally developed educational training program for family day care mothers, although, according to the recommendation of the National Board of Health and Welfare, family day care mothers "should all, in the long run, have a training equivalent to that of a nursery nurse". Many municipalities offer a 50-100 hours mandatory course as introduction to the work as a family day care mother and provide guidance and support through specifically hired supervisors. The family day care home is always inspected and approved by the local authority prior to the hiring of the family day care mother.

Swedish children start school at the age of seven. During their elementary school years, they usually have classes from 8-1:30 every week-day. If their parents are working, they might be offered a place in an after-school center, where they will spend the afternoon with a group of 15-18 other school-aged children and two "Leisure-time teachers" (Fritidspedagoger). The education and training of this category of child care workers is very similar to that of the pre-school teachers, often the two groups of students take courses together. The practical field-experiences of students in training to work with 7-12 year olds will vary somewhat from the field-work of the pre-school teacher students, being more directed toward the needs and demands of early adolescence. The fact that leisure-time teachers also might work in settings other than the after-school home (i.e. different forms of youth clubs and institutions) also affects the contents of the training program. After graduation, the leisure-time teachers sometimes might find themselves working closely together with the elementary school teachers (some after-school center are actually located in the elementary school), or closely together with staff members in the day care center (some day care centers have extended sibiling-groups including the school-age children). Sometimes, however, the after-school center is a building of its own, specifically designed for its purpose of caring for school-aged children.

Each day care center has a director, who is formally responsible for the activities in the center. This director is usually an experienced preschool teacher, who has had some additional administrative in-service training. Center directors in a given area normally get together on a regular basis to share experiences, compare budgets and plan activities, or discuss problems of common interests. One such problem might be the difficulty to attract men to work in the child care sector. In 1984, only 6% of the staff members in Swedish day care centers were men, not including a small number of young men who, being conscientious objectors, were doing compulsory public service in centers, instead of military training. It is a widely held belief among administrators and child care workers, that more men in child care centers would not only cut shortages in personnel supply, but also contribute to make the full and part time preschool a better environment for adults and, most importantly, give the children a much needed opportunity to spend time in daily activities with adults of both sexes. Especially for preschool age boys, the lack of same-sex adult role-models is seen as an obstructing factor in the changing of traditional sex-role attitudes.

An overview of the organization of the two main forms of pre-schools is shown in table 2.

Table 2. Organization of full time and part time pre-schools in Sweden.

Full time preschool	1-6 (10) year old children	7-10 hours a day	Group size 12-18	2 preschool teachers 1 nurse
	Fee (200-2000 SEK a month)	Parents employed or study	Children with special needs	10-60% of 1-6 year olds attend
Part time preschool	Mostly 6 year olds or 4-6	3 hours a day	Group size 15-20	1 preschool teacher 1 nurse
	Free of charge	Parents at home or employed	Every child right to attend	98% of 6 year olds and some 4-5 years attend

CHAPTER 2

METHODS FOR OBTAINING DATA

In this study we see children's activity as depending on a certain context. In order to be able to interprete activities from their functions as well as expressions of the children's needs and characteristics in the environment it was necessary to get a comprehensive picture of the child's doings. Observing the same child for 20 continuous minutes made it possible to categorize each minute and at the same time get an image of the context. Each minute was coded as a separate unit in each of the categories activity, language and social group constellation. Further, a judgement was made of the number of play bouts (themes) that were observed during the 20 minutes of observation.

Each child was observed on two occasions during two different days and at different times in the day. In the full time group the child was observed once in the morning and once in the afternoon. In the part time group the same child was observed twice during either the morning or the afternoon session during its stay in the preschool. The observations were distributed as evenly as possible from 8.30 to 11.30 a.m. and 12.30 to 3.30 p.m.

From each preschool group five children between 5 and 6 years old were observed. As there are usually few children in these ages in full time groups, the five oldest children were chosen. In the part time groups the children were chosen randomly from the name list. Thus each preschool group was observed 200 minutes.

From a statistical point of view the use of continuous minute-based observations instead of timesampling can be discussed. Continuous minutes are dependent on each other to some extent. A child does not usually shift activity from one minute to the other. As the observations were spread out over ten different occasions during the day the decreased variation within each twenty minute period probably plays a limited role for the results on the whole.

The observations were done "by hand", that is, the observations were written down directly from the living reality. Video recording was tried out in the English study but was rejected as it was regarded as restricting the area of observation too much. Video recording was used in the corresponding study in Miami, however, which led to some difficulties for the coding.

The observations started by a few minutes of pre-observation and were followed up by about five minutes of unrecorded observation. The on-going activities could in that way be placed in a context. The protocols were coded as soon as the observation was finished.

The observations were performed by preschool teacher students in Gothenburg and Borås where training in observation is requested as a part of the curriculum. The categorization of the observed minutes was practiced in the class room. During the practice periods that took place in the third and fourth term of the five term preschool teacher training, the students were assigned to train the observation technique and coding procedure. After the practise period, the protocols were discussed in the class room.

It turned out that the observers needed about 10 to 12 hours of training all together to make the observations and coding in an acceptable way. Teaching the use of the different categories and training in the observation method was a necessary precondition for a well performed observation.

In a separate study done by two preschool training teachers, the reliability of the coding was tested. The students in one class were requested to blind code one protocol.The results showed that the percentage of agreement varied between the different categories. For the activity categories the agreement was on the average 75 % and for the social categories somewhat lower. After the reliability study, the students were trained with the help of video recorded situations in order to make better distinctions between the different categories. The reliability could thus be expected to have risen in the final study.

EXAMPLE OF AN OBSERVATION

O = The observed child

B = Another child

V = A teacher (personnel)

Before the observation O and B are playing in the play hall. They go to the carpenter workshop. They do carpentry while talking (discussing some "language problem"). Other children come, stop and look at O and B who go on working.

MINUTE ACTIVITY and LANGUAGE
1 O to B: I can get a thing for you.
O goes to the play hall and gets some scissors
O comes back to the carpentry room
O to B: Please!
Give the hammer to me!
B to O: I had it already
O to B: But couldn't we have it together
O gets a new nail and board
Codes: PM PAIR

---

2 O nails in her board
B to O: You can get a new there
O to B: Alice, I can nail
B to O: Why did you say that you did not know?
Codes: LSC PAIR

---

3 All the nails fall out and O and B whisper something to each other.
They help each other picking them up
O to V: Don't leave!
O to B: None (of the nails) was lost
Codes: MAN PAIR

---

4 O goes on nailing when all the nails are picked up
Codes: SSC PAIR

---

5 O and B help each other nailing two boards together
O to B: Now it sticks, anyhow
B to O: I'll help you!
O hits herself on the thumb
O to B: Aj, aj. Alice
B to O: Did you hit yourself on the thumb?
Codes: SSC PAIR

6 B to O: Then I know what to do. Put your thumb in the cold.
Are you feeling better?
O to B: Yeees
Now I brush my boat
Now I file my boat
Codes: SIMP PAIR

7 V comes telling them that it is gathering time. She asks them to clear up.
B and O put things away during silence
Codes: DA (PAIR)

8 O runs into the gathering room to the sofa. She looks at the Skrållan doll of another child who yells
Codes: PM SOL

9 O and B fling themselves into the corner of the sofa.
The gathering begins. O and B whisper to each other in the corner.
(there are 10 children present)
O and B are looking at each other's hands
O to B: Who has the biggest hands?
B to O: We have the same size
O to B: No, I´ve bigger
Codes: EX PAIR

10 O pulls in her hair
O to B: (Whispers something)
I've four hairs
B to O: I've more
V asks O and B to be quiet
Codes: EX PAIR

11 V has an introduction about the police and shows a picture of a policeman
O is looking and then jumps a couple of times in the sofa.
V is talking about the police. O is looking and jumps a little in the sofa.
Plucks in B:s hair
Codes: GA (LG)

12 V goes on talking
O to V: I knew already!
O sits upright in the corner of the sofa, silent.
Codes: GA (LG/P)

13 V is asking about the police.
O sits listening
GA (SG/P)

(The gathering goes on during the rest of the observation period)

CATEGORIZATION OF ACTIVITIES

The same categories are used as in the Oxford Preschool Research Study. These are described in CHILD WATCHING AT PLAYGROUP AND NURSERY SCHOOL by Sylva, Roy and Painter (pp 240-243).
A few adjustments have been made to better fit the ages of the children. The children in the Swedish study were 5 to 6 years old while they were 4 to 5 years old in the Oxford study.

The following categories are used

LARGE MUSCLE MOVEMENT (LMN)
The body movement should be the main aim of the activity

LARGE SCALE CONSTRUCTION (LSC)
Construction should be the main aim of the activity with the use of huge constructional material like big blocks

SMALL SCALE CONSTRUCTION (SSC)
Construction should be the main aim of the activity but with use of small constructional material such as lego

ART (ART)
Creative activities with paper, paint, textiles, clay, etc.

MANIPULATION (MAN)
Activities with the aim of coordinating hand/arm and the senses.

ADULT DIRECTED ART AND MANIPULATION (ADM)
Activities directed by an adult is the criteria, not the art activity

STRUCTURED MATERIALS (SM)
The structure of the material limits the extent of the activity

THREE Rs ACTIVITIES (3Rs)
A clear intention by the child to actively use symbolic material

EXAMINATION (EX)
A clear intention by the child to examine an object in order to gain knowledge

PROBLEM SOLVING (PS)
Constructive, logical reasoning to solve a problem, conflict etc

PRETEND (PRE)
Transformation of objects and fantasy.

SCALE VERSION TOYS (SVT)
Objects are used with their "real" meaning including dolls, prams and dishes (in contrast to the Oxford study)

INFORMAL GAMES (IG)
Spontaneous and loosely organized play with other children

SPONTANEOUSLY STRUCTURED PLAY (SSL)
The play structure is determined at the play moment and is not given by tradition

ORGANIZED PLAY(OP)
Formally structured play with rules determined by tradition, competition games, etc

GAMES WITH RULES (GWR)
Board games

MUSIC (MUS)
Listening to or playing actively, singing, dancing etc

GROUP ACTIVITY (GA)
A group of at least three children directed by an adult where the adult is transmitting an educational message, reading, discussing, etc

SOCIAL INTERACTION, NON-PLAY (SINP)
Social interaction with other children or adults verbal and physical without play .

DISTRESS BEHAVIOUR (DB)
Seeking comfort or attention in a distress situation from another child or adult

STANDING AROUND (SA)
The child is not actively engaged in anything seemingly

CRUISING (CR)
Active movement around from one thing to another when the child appears to be searching for something to do

PURPOSEFUL MOVEMENT (PM)
Purposeful looking for something to do

WAITING (W)

WATCHING (WA)
Watching other children or what is happening attentively

DOMESTIC ACTIVITY (DA)
Routine activities like eating, washing, dressing, coming and going, dressing, etc.

(Examples of each code category are given in the Swedish version of the report).

CATEGORIZING THE LANGUAGE

The observers were requested to write down the language as fully as possible. This could be difficult if the children were in a lively discussion. In this case the verbal language was recorded by marking whom the observed child was talking to and who replied, e g O to V (the child says something to a grown-up) without writing down what the child said or just noting shortly the contents of the remarks. The language activity has thus not been analyzed closely as to content. It is, however, an important complement to the analysis of the activities.

The observations made it possible to analyze the language activity from the following aspects:

If the observed child was involved in language interaction

If this was in the form of dialogue or monologue

If the child talked to another child or a grown-up

The child's language was coded in the following categories:

1. The child talks to somebody or is spoken to by another child or grown-up. Also when the child addresses the whole group or no particular person. The remark is in the form of a monologue, that is, the child may get an answer but the conversation does not go on.

2. The child is talking to another child in the form of a dialogue, that is, the child gets an answer and replies on the same theme. The conversation comprises at least three links
O to B to O .....

3. The child has a conversation with a grown-up in the form of a dialogue, that is, comprising at least three links on the same theme
O to V to O .....

Each observed minute was coded according to the categories described above. Only ONE dialogue was coded during the observed minute even if there was more language activity going on.

SOCIAL GROUP CONSTELLATION

The same social codes were used as in the Oxford study, that is

SOL Solitary play

PAIR Two persons together (O and another child or a grown-up) having direct or indirect contact

SG Small group of three to five children

LG Group of six or more children

If the child was playing near one or more children doing the same thing but not having contact with them a P was added.

PAIR/P O is close to another child but is neither talking to nor playing with it.

SG/P O is sitting or standing in a small group of 3-5 children but does not talk to or play with any of them

LG/P O is sitting or standing in a big group of 6 or more children but does not talk to or play with any of them

When the child is in contact with a grown-up this is marked by a parenthesis.

Generally it was shown that the categorization of the social group constellation was more difficult than expected. When does a conglomeration of children become a group? How is interaction defined? Children in preschool are often in spatial closeness but this does not mean that they can be defined as a group. In our study the group category was used when some form of contact between the group of children was observed. The activity was parallel if it had the same goal as that of the peers. Contact with the grown-up was marked not only when interaction was observed but also when the grown-up directed a group activity.

The same rule was used as by choice of activity code, that is, social code was chosen from what characterized the main part of the observed minute. If for example two children are sitting in a small group and interacts only with each other the category PAIR is used and not SG. If the child plays in a big group but walks away to get something for a minute, LG is used as the child is part of the big group. If the children are sitting in a big group and the grown-up is directing the group but there is no child interaction, (SG/P) is used. But if the grown-up attends a particular child and talks to it, (PAIR) is used.

In order to judge the social group constellation the context and relations are important, that is, to observe how the activities are organized and which contacts are important.

THEME (BOUT)

The theme code is used in the same way as in the Oxford study. By theme is meant a string of activities connected to each other by a common goal. Every twenty minute observation period was divided into themes. The number of shifts of theme was counted in each 20 minute observation period.

CHAPTER 3

CHILDREN, PERSONNEL AND INSTITUTIONS

THE OBSERVED CHILDREN

Data concerning the presence of the children, the organization and social surrounding of the preschool, education, age and working conditions of the staff were collected by a questionnaire. The collection of data was done by the students who made the observations.

Altogether 559 children in 115 preschool groups were observed. The preschools were situated in 19 municipalities on the west coast of Sweden. Of the 115 preschool groups, 72 were organized as full time day care, that is, they were open from 6.30 a.m. to 6.30 p.m. and 43 were organized as part time preschools. In these the children attended the preschool either from 8.30 to 11.30 a.m. or from 12.30 to 3.30 p.m.. In only one case the full and part time preschools were integrated.

About half of the preschools were situated in Gothenburg a city with about 500 000 inhabitants. They were evenly distributed in four separately administered parts of the city. The rest of the preschools were situated in towns and villages surrounding Gothenburg at about a distance of 1-2 hours ride by car.

Most preschools were municipal. Some were organized by the church and one private Montessori preschool was included in the study.

In each full time preschool the five oldest children were observed. In the part time preschools five randomly chosen children who attended either the morning or the afternoon group were observed. The sample can be regarded as representative of 5-6 year old children in full time and part time preschools in western Sweden. The sexes were evenly distributed, 47 % were boys and 53 % were girls.

The observed children in the part time groups were on the average 6.1 years old and the children in full time groups on the average 5.8 years old. Some had passed their 7th birthday. The observations were made from January 15 to March 15 in 1984.

Table 3:1 Age distribution of the observed children (percent)

Age	Full time	Part time	Total
5	33,6	11,8	25,2
6	51,7	65,7	57,1
7	14,7	22,5	17,7

Eighty percent of the observed children in the part time groups had started preschool in the fall term and had thus spent 5-8 months in the group. The observed children in the full time preschools had spent from 4 to 48 months in the preschool, on the average about 2 years.

All the children in the part time groups spent 3 hours a day at school, either in the morning between 8.30 and 11.30 or in the afternoon between 12.30 and 3.30 pm.

About 60 % of the children in the full time groups spent 8-9 hours a day in preschool. Half of the rest spent less than 8 hours and the other half more than 9 hours a day in the preschool. About 12 % of the children were registered half time, that is, less than 7 hours a day.

All full time preschools open at 6.30 in the morning. Most children arrived between 7 and 8.30. A majority of the children were picked up between 3 and 5 pm. Only 18 % stayed longer than 5 pm. Thus most children were in preschool during the periods of observation.

We also asked for information about the absence of the children. The number of absent days in the month of February was registered. As there was a week of school holiday in the middle of February in the part time preschools, absent days were counted for three weeks while in full time preschools absence was counted for four weeks.

It was found that, in spite of this fact, full time children in full time preschools were much more often absent than children in part time preschools. More than half of the children in full time preschools had been absent 4-9 days during February while only 12 % of the children in part time preschool had been absent more than 4 days.

Most of the observed children were of Swedish origin. About 9 % of the children were from immigrant families Most of these were found in full time preschools.

Of all the 559 observed children 12 percent were priority cases, that is, they were referred to the preschool by social authorities for family reasons.

THE STAFF

Information on staff conditions that were regarded as relevant for the study included the following:

Professional training (preschool teacher, nurse or other kind of training)
Full time or part time employment
Sex
Number of years of employment
Absence from work
Kind of employment (permanent or temporary)
In-service training
Number of temporary staff in the group
Number of other adults (non-professional) working in the group

Altogether there were 391 people working with the children in the 115 studied preschool groups, 264 in full time groups and 127 in part time groups. In the full time groups there were on the average 3.7 and in the part time groups 3.0 employed teachers and nurses on the average. Many were employed part time. This was particularly common in part time groups where 63 % of the personnel worked part time. In the full time groups 1/3 worked part time.

Training and age of the staff

TABLE 3:2 Percentage of staff with different kinds of training in full and part time preschools

Training	Full time	Part time
Preschool teacher	57.6	52.8
Nursery nurse	26.5	34.6
Assistant	2.3	3.1
Helper	11.0	9.4
No information	2.6	0.1
	100.0	100.0

More than half of the staff had preschool teacher training in both full and part time preschools. The percentage of nursery nurses were larger in part time than in full time preschools.

Most of the staff were women. Only 21 men were employed in the studied groups, 4 in part time and 17 in full time preschools, in all about 5 %. Preschool is to a large extent a female world.

The rapid expansion of preschool provision during the 70ies led to a rapid expansion of preschool teacher training. The staff in many preschools was thus dominated by young and inexperienced teachers and nursery nurses. The distribution of the ages of the staff is shown in table 3:3.

TABLE 3:3 Distribution of the ages of personnel in full time and part time preschools (percent)

AGE	Full time	Part time
25 or less	14.4	7.9
26-30	30.7	8.7
31-35	22.3	21.3
36-40	14.8	24.4
41-50	10.9	27.5
51 or more	3.0	9.4
No information	3.9	0.8
	100.0	100.0

In the 115 studied groups about half of the personnel in the full time preschools were between 25 and 35 years of age and about 1/4 were above 35 years of age. In the part time groups the teachers and nurses were older, half of them were between 35 and 50 years of age. The majority of the personnel were thus older than the personnel in the full time groups. Only about 10 % were under 25 years of age. The average age of the employed in the full time groups was about 30 and in the part time groups about 36-37 years of age.

This also means that the teachers and nurses were more experienced in the part time groups than in the full time groups. Two third of the staff members in the part time groups had worked for 7 years or more in preschool compared to 40 % of the staff members in full time groups.

Teachers and nurses in the part time groups had thus longer experience of working with preschool children, they were older on the average and worked more often part time.compared to teachers and nurses in full time groups.

The staff in the part time preschools were also more often employed on a permanent basis, 85 % in comparison to 72 % in the full time preschools.

Studies made during the early 80's showed that the turnover of staff in full time preschools was alarmingly high. Is that the same in our study?

It was shown that about half of the staff in the full time preschools had worked in the studied group for at least 4 years. Only about 1/5 had worked in the group for less than one year.

In the part time groups most of the staff (84%) had worked for more than 4 years in the group, half of these for more than 10 years. The same proportion as in the full time groups (1/5) had worked for less than one year. A separate analysis of the relation between employment category and length of employment was not made. Probably assistants and helpers were the ones with higher turnover.

Absence of the employed

How often were the people working with the children absent?
The results showed that the personnel in full time groups were more often absent than personnel in part time groups. More than half of the employed in the part time groups had not been absent at all during the month of February (holiday week is not counted). In the full time groups less than a third had no day of absence. Almost one fourth of the employed had been absent 5 days or more days during the month of February.

The high absence among the staff in full time preshools can be explained by the fact that they are women in the ages when many have small children and thus have a legal right to stay at home if the child is ill (According to Swedish law parents have the right to stay at home with sick children for a maximum of 60 days a year). A more careful analysis of the reasons for absence had given a more clear picture of the higher absence rate in full time preschools.

Further education and in-service training

Information was obtained about the number of days that the employed had taken part in the following types of training during the year of 1983.

Formal education
In-service training arranged outside of the preschool.
In "service" training arranged within the preschool.

Altogether it was found that 8% of the employed had been absent for formal studies. The time spent in leave of absence was short, 2-22 days.

It was found that almost half of the employed had not taken part in in-service training arranged outside of the preschool, about the same proportion in the two types of preschool.About one third had taken part in in-service training for 1-5 days during the year. Of the staff in part time groups, 13% had participated in such training lasting for 2 to 10 weeks compared to only 2.6 of the staff in full time preschools.

Thus it was found that almost half of the staff did not take part in any kind of in-service training arranged outside of their institution during a whole day in the year before. Some had participated in training arranged within their institution in the form of study circles and similar arrangements. It was found that in 54% of the full time institutions no such educational arrangements had been made. Thus over half of the staff in full time preshools did not have opportunities to take part in in-service training within their institution.

Substitute teachers and extra personnel

Staff absence means that substitute teachers have to be recruited. To get an idea of how many different adults children meet in preschool we inquired how many different substitute teachers had been employed in the studied groups from January 15 to March 15, that is, during the time when the observations were made.
The results are shown in table 3:4.

TABLE 3:4. Number of different substitute employees during a two months period (percent)

Number of sub.teach	Full time	Part time
0	5.6	38.1
1	15.3	33.1
2	31.9	19.0
3	16.7	2.4
4-5	18.0	2.4
6-7	7.0	0
No information	5.6	4.8
	100.0	100.0

There had been many more different substitute employees in the full time than in the part time preschools. The average number of substitute personnel was in full time preschools 2.7 and in full time preschools 1.0. In 71 % of the part time preschools there had been only one or none substitute personnel while the corresponding percentage for the full time preschools was 21. In one fourth of these there had been 4-7 different substitute personnel during the studied two months period. This difference can be explained by the higher absence rate among the staff in full time preschools and not by the total number of staff which was about the same.

Other grown-ups than the regular personnel, such as home language teachers, temporary resource persons, etc were engaged in some preschools. We asked how many "extra" grown-ups were regularly engaged in the preschools.

It turned out that in 2/3 of the full time and in about 1/2 of the part time preschools such "extra" persons were regularly engaged.

Thus the results showed that the children in full time preschools met quite a few more different adults than children in part time preschools in which the staff situation seemed to be rather stable.

THE CHILDREN'S GROUPS

Information on the children's groups in the studied preshools concerned

Number of full time and part time registered children
Number of children present during one particular month
Sex and age distribution of the children
Number of children living with one parent
Number of children with priority on account of social or economic reasons
Number of children living outside of the neighbourhood
Average fee per family

The size of the children´s groups

Compared to preschools in other countries there are small groups in Swedish preshools. The National Board of Social Welfare recommends group sizes of about 15 children in full time preschools and a maximum of 20 children in part time groups.

Sibling groups, that is, children from 1 to 7 or 10 in the same group, are usually smaller. In groups for children between 1 and 3 years of age there are usually about 10 to 12 .

Each preschool compartment has a stipulated number of places. These are not always filled up for different reasons. For example, the number of children can be restricted because of one or two "problem children" have been placed in the group or the place has become vacant and no child has been placed yet. The number of stipulated places are shown in table (3:5).

Table 3:5 Number of stipulated places in the studied full time preschools (percent)

Number of places	Full time preschools
10-14	26.4
15	51.4
16-19	15.3
20	6.9
No information	4.8
	100.0

In 78 % of the full time preschools there were at least 15 stipulated places. In 22 % there were places for 16-20 children. This is the same as in Sweden as a whole. In part time preschools there are usually 20 stipulated places for each morning and afternoon session.

The results show that there were fewer children registered in the groups than there were available places (Table 3:6)

TABLE 3:6 Number of registered children full time in the studied groups (percent)

Number of children	Full time (7 hrs or more)	Part time preschools (morning and afternoon)
7-9	16.7	0.0
10-12	33.4	2.4
13-15	41.7	2.4
16-20	8.3	9.6
21-30	0.0	26.2
31-35	0.0	30.9
36-40	0.0	23.8
No information	0.0	4.7
	100.0	100.0

In half of the studied full time groups there were 7-12 children registered full time. Nearly half of the groups had 13-15 children and only a few had more than 16 children registered full time.

Some of the children in full time preschools were registered as half day children (less than 7 hours).

TABLE 3:7 Number of children registered half day (percent)

Number of children	Full time preschool
0	29.2
1-2	30.6
3-5	19.4
6-8	20.9
	100.0

The majority of the groups had at least one child registered half day (71%). On the average there were 2.5 children registered half time per group.

Most part time preschools (67%) had one group in the morning and one in the afternoon. In some part time groups children attended the preschool only on some days in the week, mostly preschools belonging to a church.

Many of the children in full time preschools were often absent. The average number of children present during the month of February is shown in table (3:8)

TABLE 3:8 Average number of children present during the month of February in full time and part time preschools

Average number of children present in the group	Full time	Part time preschools
7-10	31.9	2.4
11-12	38.9	7.2
13-15	21.9	47.6
16-	1.4	26.2
No information	5.9	16.6
	100.0	100.0

In 70% of the full time preschools there were only 7-12 children present each day on the average during the month of February. Even if this number is somewhat low because of some absence during vacation week, it can be stated that the group size is low in the studied full day preschools. In about half of the part time preschools there were between 13 and 15 children present on the average and in another fourth between 16 and 20 children. The figures are supported by data from the observations of the daily scheme reported in another chapter.

In 1985 the rules for state subsidy to local arrangement of preschools were changed. From being connected to a preschool place it is now connected to the number of registered children. As a consequence the number of registered children has risen. In 1990 most full time groups consist of 16 to 18 children.

Composition of ages in the children´s groups

During the 80ies it was common to combine groups of children in different ages, sibling groups, consisting of children between 3 and 7 or 1 and 7 (10) years of age. In the studied preschools the number of groups with different combination of ages are shown in table (3:9)

TABLE 3:9 Percentage of full time and part time preschools with different age combinations in the children's groups

Age	Full time	Part time preschools
5-7	2.8	66.7
3-7	38.9	26.2
1-7	48.6	2.4
1-10	8.3	0.0
No information	1.4	4.7
	100.0	100.0

In the majority of the full time preschools the children were between 3 and 7 or 1 and 7 years of age. In the part time groups the children were usually 6 years of age but in about one fourth of them there were children between 4 and 6.

PRIORITY PLACEMENT

According to Swedish social law children in need of special support have priority right to a preschool place. Special support may be needed for social or economic reasons. The need for preschool placement is judged by social authorities. The interpretation of the law varies between municipalities. In some municipalities one-parent children have priority to preschool places. As a rule the number of children are diminished when there are two or more priority children in the group. Information was obtained regarding the number of one-parent children and priority children on account of social or economical reasons.

TABLE 3:10 Percentage of one-parent children in full-time and part time preschools

Number of children	Full time	Part time preschools
0	8.3	33.3
1-2	32.0	26.2
3-4	22.3	14.3
5-6	16.7	7.2
7-11	20.1	11.9
No information	0.0	7.1
	100.0	100.0

The average number of one-parent children was 3.8 in full time preschools and 2.3 in part time preschools. In more than 1/3 of the full time groups the majority of the children had one parent. The part time groups varied a great deal. In 1/3 of the groups there were no one-parent children while in 1/5 of the groups there were 5 - 11 such children.

In 2/3 of the full time groups and in almost all of the part time groups there were one or more children with priority for economic reason. Probably information on this was not fully reliable as the staff do not want this fact to be known. Priority for economic reason is also defined in different ways in the municipalities.

TABLE 3:11 Percentage of children with priority for social reasons in full time and part time preschools

Number of children with social priority	Full time	Part time preschools
0	31.9	50.0
1	26.4	14.3
2	13.9	14.3
3-8	18.1	16.8
No information	9.7	4.8
	100.0	100.0

From the results it can be shown that children with social priority are often placed in full time preschools. Half of the part time groups had no such child compared to about one third of the full time groups. Another one third of the full time groups had two or more children with social priority.

Increased demands on the preschool as a social resource by way of placement of priority children and integration of handicapped children has led to demands from the unions for higher staff/child ratio.

STAFF/CHILD RATIO

The proportion between number of full time employed staff and number of registered children has been calculated for the full time and part time preschools counting children registered full time (7 hours or more). As the working day in full time preschools is 12 hours and in part time preschools 8 hours including preparation time the number of staff present varies in the two kinds of preschools. Most full time preschools try to arrange the working hours of the staff to fit the hours when most children are present.

TABLE 3:12 Staff/child ratio per group in the studied full time and part time preschools (percentage)

Staff/child ratio	Full time	Part time
1 : 3.0-4.0	22.2	0.0
1 : 4.1-5.0	36.1	2.4
1 : 5.1-6.0	22.3	2.4
1 : 6.1-7.0	5.5	7.2
1 : 7.1-8.0	7.0	19.1
1 : 8.1-9.0	1.4	19.0
1 : 9.1-10.0	2.8	31.0
1 : 10.1-12.0	0.0	14.2
No information	2.7	4.7
	100.0	100.0

In the full time preschools there was usually a full time employed staff per 3 - 6 children while in the part time groups there was about 7 to 10 children in each group per full time employed staff. As there were two groups per day the part time preschool teachers had twice as many children registered. In the full time preschools there were usually three staff, one working from 6.30 a.m.to 1.30 p.m., one working from 8 a.m. to 4 p.m. and one from 10.30 to 6.30 p.m. In part time preschools there were usually two staff working with one group of children from 8.30 to 11.30 a.m.and another group of children from 12.30 to 3.30 p.m. The staff/child ratio was thus considerably higher in full time than in part time preschools.

INSTITUTIONAL ORGANIZATION OF THE PRESCHOOL

A number of conditions that concerned the organization of the studied preschools were investigated. Information on organizational factors that were considered to be of importance for the educational work in preschool were

Type of preschool (full time or part time preschool or other kind)
The size of the establishment
Type of housing
Opening hours during the day
Number of staff and their training
Number of men and women in the staff
Amount of further education arranged within the establishment
Number of staff employed during the year preceding the year of investigation

Type of establishment

About half of the full time preschools and 2/3 of the part time preschools were separate establishments, that is, they were not combined with any other type of establishment. The rest of the full time preschools were combined with leisure time centers or in some cases to part time groups. Most of the full time establishments contained 1-3 different compartments.

The staff

In the total number of establishments where the studied preschool compartment was situated, there were 1360 people employed. Of these, 56% were preschool teachers, 41% nursery nurses, 10% leisure time teachers, 24% maintaining staff and 6% assistants. Many of the staff worked part time. Most common was part time employment among the maintaining staff (51%). Thirty percent of the nurses and preschool teachers worked part time. A great number of the staff thus worked part time which meant that there were many substitute staff that filled out the part time vacancies.

The percentage of men among the total number of staff was 5.6. In half of the establishments in which the studied full time preschool was situated there was no man employed. In 86.5 of the studied part time preschools there was no man employed. Thus, most of the children had no contact with a male in the preschool, particularly if they were in a part time group.

Staff turnover

To get an approximate measure of staff turnover we asked how many of the staff were also employed during the year before the study.

It turned out that in half of the full time establishments there had not been any new staff member employed during the preceding year. The corresponding percentage was 72 for the part time groups. .The staffing situation was thus more stable in the part time groups. Only 10 % of the preschools teachers and nurses in all the establishments had got their position during the preceding year. This percentage is in agreement with the conditions in the studied groups.

THE SOCIO-ECONOMIC CHARACTERISTICS OF THE NEIGHBOURHOOD

Information on the following characteristics of the neighbourhood were obtained.

Degree of urbanization
Number of service establishments and industries in the vicinity
Traffic situation and available parks
The age and conditions of rent of housing
Proportion of immigrants living in the area
Proportion of families receiving welfare grants
Proportion of unemployment
Average income among men and women
Number of full time preschool places
Number of applications for a preschool place

Urbanization

The studied preschools were spread within a geographical area from the north of the province of Bohuslän to the province of Halland and the inner parts of Västergötland, situated at the most about 150 kilometer from Gothenburg. The area was divided in four different areas as to degree of urbanization.

TABLE 3:13 The distribution of preschools in areas with different degrees of urbanization (Percent)

AREA	Full time	Part time preschool
City area (Gothenburg)	48.6	38.1
Suburbs and towns	38.9	33.3
Village	12.5	23.8
Countryside	0.0	4.0
	100.0	100.0

Most of the preschools, both full time and part time, were situated in cities and towns. Part time preschools were more often situated in towns and in villages.

Investigation of the distance between the preschool and working places like schools, stores and industries no difference was found between full time and part time preschools.

However, the full time preschools were more often situated close to places with heavy traffic.

Most of the preschools were close to "green" areas. About 90 % of the preschools were within walking distance to a "green" area.

In most municipalities children are placed in a preschool that is situated as close to the home as possible. In the study it was reported how many children lived in areas beyond the usual area of uptake.

TABLE 3:14. Number of children living outside of the neighbourhood of the preschool (percent)

Number of children	Full time	Part time preschool
0	11.1	31.0
1-2	30.5	14.3
3-4	20.8	18.0
5-6	11.1	2.4
7-11	26.4	26.2
No information	0.1	8.1
	100.0	100.0

Children in part time preschools were more often lived close to the preschool compared to children in full time preschools. The average number of children living outside the residential area surrounding the preschool was for full time preschools 3.8 and for part time preschools 2.3. In one fifth of the full time preschools the majority of the children lived outside of the residential area surrounding the preschool.

Type of residential area

Most of the children in both full time and part time preschools came from the same area as the preschool. Information on type of residence and social character of the area was obtained with the help of municipal official statistics.

The full time preschools were more often situated in areas with apartment houses that were rented, 43 % compared to 33 % for the part time preschools. About one fourth of the preschools were placed in small house areas and about one third in areas with mixed apartments and small houses.

Social characteristics of the up-take area

In most of the municipalities official statistics was available regarding social conditions in the different parts of the municipality. If data was not available a judgement of the severity of social condition in the preschool area was obtained from the director of the preschool. For 13 preschools no such judgement was obtainable.

From the percentage of foreigners, "persons involved in social measures", unemployed and the average income of persons living in the preschool district, factors that correlated highly with each other, a tree-point scale was constructed. The preschool districts were divided into high, middle and low areas as to extent of social problems. In the cases where official statistics was not obtainable, the same division was made from judgement by the director of the preschool.

The distribution of preschools in the three kinds of areas is shown in table 3:15.

TABLE 3:15. The distribution of the preschools according to extent of social problems in the area (percent)

Extent of social problems	Full time	Part time preschools
Low (High status area)	44.4	45.2
Middle	20.8	33.3
High (Low status area)	23.6	9.5
No information	11.2	12.0
	100.0	100.0

More full time than part time preschools were situated in "low status" areas. Most of these were situated in the city of Gothenburg usually in areas consisting of apartment houses.

The results showed that there were somewhat more children registered in the full time groups in the "low status" compared to the groups in the "high status" areas, 13.5 compared 12.5 on the average. In contrast to expectations, the number of children with "social priority" were about the same in the different kinds of area, an average number of 1.5. The number of children with one parent was however much greater in "low status" areas, 6.0 on the average compared to 2.6 in "high status" areas. The children in "low status" areas were more often living close to the preschool.

In spite of the fact that the preschools in the "low status" areas had more children from socially deprived homes there was a lower child/staff ratio in these than in preschools in middle and "high status" areas. The percentage of full time preschools with relatively low child/staff ratio was 65% in "low status" areas, 43 % in middle and 58 % in "high status" areas.

Preschools in middle status areas, which mostly consisted of mixed housing, had usually fewer compartments in the establishment, fewer children registered full time and more part time, there were fewer children present on the average but about the same number of children with social priority.

The turnover of staff did not differ between the different areas. In the "high status" areas more preschool teachers and in the "low status" areas more nurses had been employed during the preceding year. The number of substitute personnel during the studied two months period was about the same in all three kinds of areas.

A noticeable difference was found as to availability of further education. In the "high status" areas 59 % of the staff had participated in some kind of further education compared to only 24 % of the personnel in the "low status" areas.

Preschools in cities, towns and villages

Comparisons between three types of urbanization areas showed that the full time preschools in the city of Gothenburg were more often connected to a big establishment than preschools in towns and villages. The full time preschools in Gothenburg were also more often situated i areas with apartment houses, one third of which had a high degree of social problems. More parents of the children in full time preschools in Gothenburg were defined as low income parents.

The size of the children's groups differed mainly dependent on the fact that there were more part time children registered in the full time groups in the towns and villages than in the city of Gothenburg. In the villages there were on the average 5.6 children registered as part time children compared to 1.7 in the city and 3.0 in towns Attendance was also higher in villages. In the more urbanized areas there were on the average 11.0 children present during the month of February while in towns and villages there were on the average 13.0 children present.

In the part time groups the opposite was true, that is, there were more children registered in the part time groups in the city, 32.2 on the average compared to 27.2 in the villages.

It was also more common to have sibling groups (1 to 7) in the full time preschools outside of Gothenburg. More than 2/3 of the full time preschools in towns and villages had groups with children between these ages. On the other hand, more part time groups in Gothenburg had children between 4 and 6 while part time groups in towns and villages more often had only 6 year old children.

The percentage of children with single mothers was the highest in Gothenburg, on the average 4.3 children per group. In the least urbanized areas there were either a very high or a very low percentage of children with single mothers which shows that in some of these municipalities such children have priority to a preschool place and not in others. The number of children with social priority were on the average as high in the least urbanized areas as in Gothenburg. In less urbanized areas the majority of both full time and part time groups had only one or no child registered as social priority.

Comparisons of staff conditions showed that the number of substitute teachers were highest in the more urbanized areas, particularly in towns where almost all the full time preschools had had at least two different substitute teachers during a two months period. In the small villages the staff situation was more stable.

Full time preschools in the city and towns had a higher staff ratio than preschools in villages. This may be due to the fact that more children were registered on the average in the villages many of whom were registered part time.

FEES IN FULL TIME PRESCHOOLS

The fees in full time preschools vary between the different municipalities according to political policy. The fees can also be seen as an indirect measure of parents' ability to pay as the principles of fee cuts are dependent on the family income.

Information on the average fee paid for all children in the group was obtained. Beside the policy of the municipality and the parents' ability to pay the average amount of fee is influenced by the number of part time children in the group. The average amount of fee per month is shown in table 3.16.

TABLE 3:16. Average amount of fee per family in the observed full time preschools in 1984 (percent).

Average amount paid per family each month	Full time preschool
0-499 SEK	25.0
500-599	15.3
600-699	11.1
700-799	12.5
800-899	5.5
900-	5.6
No information	25.0
	100.0

In 1/4 of the preschools where information on fees was available, the average amount was less than 500 SEK per month. In half of the preschools the families paid between 500 and 1000 SEK per month. The fees were highest in Gothenburg where 69 % of the families paid between 600 and 1100 Sw crowns per month.

Part time preschools are free for all 6 year olds. Younger children pay a small fee.

SUMMARY

Half of the studied preschools, 72 full time and 43 part time preschools, were situated in Gothenburg and the other half in suburbs, towns and villages in western Sweden. The age of the studied children were on the average 5.8 years in full time and 6.1 years in part time preschools.

Most of the children were in full time preschools 7-9 hours a day. They arrived as a rule between 7 and 8.30 a.m. and returned home between 3 and 5 p.m. The absence among the children was considerable in full time preschools. In the month of February, 58 % were absent 4-8 days. In part time preschools the corresponding number was 12 %.

In the studied groups the number of staff was 391. About half of these were preschool teachers and 1/3 nursery nurses. The rest were trained as leisure time educators or had no child care training.

In the part time groups, 2/3 of the staff worked part time compared to 1/3 in the full time groups The number of employed staff was 3.7 persons in full time and 3.0 persons in part time preschools on the average. Of the staff members 5.6 % were male.

The average age of the staff was 30 years in full time and 36-37 years in part time preschools. In these the staff had been working for a longer time, 63 % had worked for more than 7 years compared to 41 % in full time preschools.

The staff in full time preschools were absent considerably more than the staff in part time preschools. More than half of the staff in full time preschools had been absent 1-8 days during the month of February compared to 33% of the staff in part time groups. The number of substitute teachers was on the average 2.7 in full time and 1.0 in part time groups during a two month period.

About half of the staff in both full time and part time groups had not participated in any further education organized outside of the preschool. Just as many, though, had participated in such education within the preschool on some occasion during the year before the study.

In half of the full time groups there were 7-12 children and in a little less than half there were 13-15 registered full time. In 70 % of the groups there were also at least one child registered part time. In the part time groups there were as a rule 30-40 registered children. About 40 % had fewer than 30 children. In 1/4 of the part time preschools there were just one group attending three hours each day.

In the majority of the full time groups there were 7-12 children on the average attending per day. In the part time groups there were 13-15 children attending in each group.

In half of the full time groups the children were from 1 to 7 years of age and in 40 % of the groups they were between 3 and 7. In the rest of the groups the children were between 1 and 10. In the part time groups the children were usually 6 years old but in one fourth there were children between 4 and 7.

Children with social priority were found in 2/3 of the full time groups but only in some of the part time groups. Most common was one or two children placed for social reasons. In 18 % of the groups there were 3-6 children placed for social reasons.

The child/staff ratio was in the majority of the full time groups 3-6 children per full time employed staff. In the part time groups there were 7-10 children per full time employed. The staff turnover the year before the study was low. Half of the establishments did not hire any new staff during the year before the study.

Most of the studied preschools were situated close to working places and almost all were within walking distance to a green area. Children in part time groups more often lived close to the preschool.

About 1/4 of the full time groups were situated in areas with many social problems compared to 10 % of the part time groups. The problem areas were mostly situated in the city of Gothenburg. The full time groups in these areas had on the average some more children registered and the child/staff ratio was somewhat lower. There was less availability of further education. The number of children with social priority was about the same on the average in all areas.

In full time groups situated in towns and villages there were more children registered part time and it was more common to have children in mixed ages. The number of substitute teachers was highest in suburbs. The child/staff ratio was highest in Gothenburg.

CHAPTER 4.

CHILDREN'S ACTIVITIES, GROUP CONSTELLATION AND LANGUAGE

SELECTION OF PRESCHOOLS

The observations were done in those practice institutions where the students were placed. The practice institutions were chosen in collaboration between the Department of education and the social authorities in the municipality that are in charge of the preschools. The practice institutions are not regarded as different from any other preschool institution.

THE OBSERVERS

The observations were made by preschool teacher students in Gothenburg and Borås. The students had been trained in observation technique and the categorization procedure during an earlier period and were trained again in connection with the collection of data. Video tape recordings were also used in the final training. All together, the data collection was preceded by 5-10 hours of class room training and two practice observations. These were used as examples when categorizing principles were discussed. The teachers were engaged in the training procedure in varying degrees.

It turned out that the students could carry out the observations in a reliable way. They seemed to be well motivated and ambitious to fulfil their task as well as possible. The observations were made as part of their class assignments.

The observation protocols varied as to amount of descriptive content. A reliability measure that had been done earlier in one of the classes showed that the students had an average agreement of 75 % on the average of the different categories. The categorization of activity was somewhat higher than that of social group setting. After this test of reliability, the students were trained further. Thus the agreement was supposed to rise.

A variance analysis was performed testing the averages of the different classes. There was a significant difference regarding the categorization of parallel activity. One class also showed to be different in amount of registered language. More talk and dialogues were registered in this class.

Generally the variation between the classes was small and non-systematic. Neither did we notice any statistical differences between the students in Gothenburg and Borås.

The project leader (G Kärrby) and an assistant (A. Eklöf, a preschool teacher trainer), read every observation. If obvious misunderstandings of the categorization procedure were noticed, corrections were made. Such corrections occurred very seldom as we presumed that the student had a better overall picture of the situation than we had.

THE DISTRIBUTION OF THE OBSERVATIONS DURING THE DAY

According to the instructions the observations should be spread randomly during the observed time, that is, from 8.30 to 11.30 a.m. and 12.30 to 3.30 p.m. In the full time preschools the child should be observed once in the morning and once in the afternoon session. In the part time preschools the child was observed twice during in either morning or afternoon session.

Diagrams 1 to 4 show how the observations were distributed during the day in the two kinds of preschool.

Diagram 4:1 Distribution of the 1st observation during the day in full time preschool (percent)

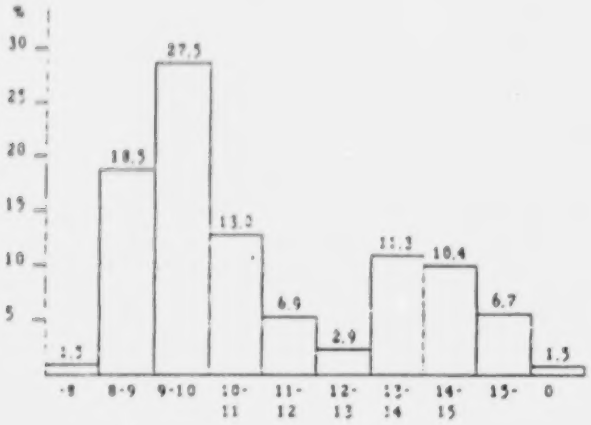


Diagram 4:2 Distribution of the 2nd observation during the day in full time preschool (percent)

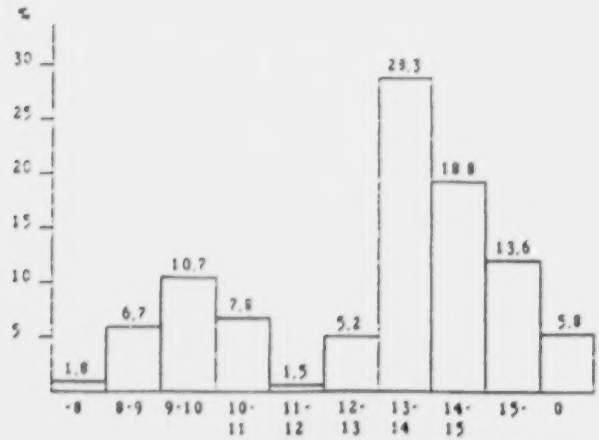


Diagram 4:3 Distribution of the 1st observation during the day in part time preschool (percent)

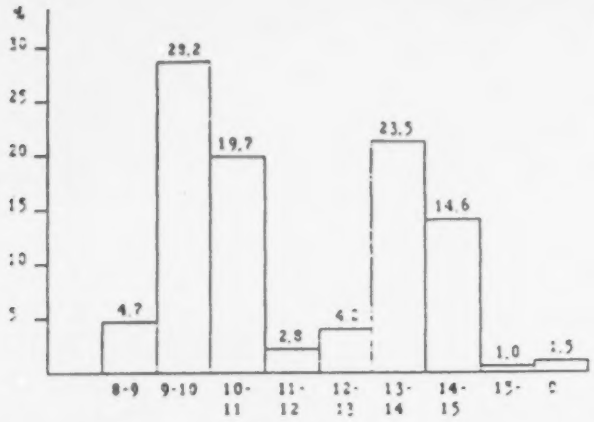
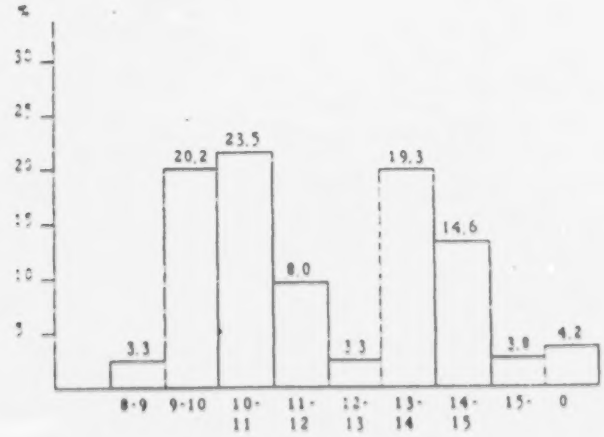


Diagram 4:4 Distribution of the 2nd observation during the day in part time preschool (percent)



In full time preschools the observations were quite evenly distributed during the day. Observations between 8.30 and 10.30 were most common in the morning and between 1.30 and 3.30 in the afternoon.

In the part time groups the observations were rather evenly distributed between 9 and 11 in the morning and between 1 and 3 in the afternoon. In both kinds of preschool observations were usually made when educational activities dominated. Thus the full time and part time groups are comparable as to representativeness of educational activity.

PATTERN OF ACTIVITY

The frequency of different activities

All together about 22.000 minutes of observations were made. The number of minutes for each category is the basic unit for the calculations. These are based on individuals. In all calculations full time and part time preschools are separated. Thus comparisons can be made between these on different measures. Although official policy prescribes that these two kinds of preschool should be the same there is reason to presume that the activity pattern is different depending on factors such as educational tradition, their different social functions and attendance time during the day.

There is also reason to suppose that there are differences between girls and boys in activity pattern as in most studies on children's play. Comparisons are thus made between girls and boys in most measures.

The sum of the number of minutes for each category in the 1st and 2nd observations is used in the calculations. The frequency is calculated as percent of the total of observed time. This means that the frequencies in full time preschools are related to 6 hours of observation time and in part time to 3 hours of observed time.

The distribution of the different activity categories calculated in percent of the totally observed time is shown in table 4:1.

TABLE 4:1 Frequency of different activities in full time and part time preschools. (Significant differences between type of preschool and sexes are marked)

	Full time	Sum	Part time	Sum	Sign form	Sign sex
Large scale movement	4.0		1.6		x	
Large scale construction	1.9		2.2			x
Small scale construction	2.4	4.3	2.5	4.7		x
Art	7.7		11.5		x	x
Manipulation	3.6		6.2		x	
Adult directed art & manful.	3.4		6.0		x	x
Structured material	3.9		5.7		x	
Three Rs activities	3.4	22.0	3.8	33.2		
Games with rules	4.6		6.1			
Music	1.2		0.9			
Group activity	9.5		9.7			
Problem solving	0.2		0.2			
Examination	0.1	15.5	0.1	16.9		
Pretend	10.6		9.9			(x)
Scale version toys	2.6	13.2	3.4	13.3		x
Informal games	3.3		0.9		x	x
Spontaneously structured play	1.5		1.1			x
Organized play	2.1		1.3			
Social interaction-Nonplay	10.0	16.9	4.6	7.9	x	
Cruicing	1.8		1.1			
Standing around	1.2		1.3			
Purposeful movement	5.1		5.8		x	
Waiting	1.9		2.1			
Watching	5.4	15.4	6.6	16.9	x	
Domestic activity	7.5		4.9		x	(x)
Bout (average number of changes)	1.45		1.38			

The activity pattern was on the whole rather similar in the two forms of preschool. The traditional educational activities like art, both child-initiated and adult directed, activities with structured material like puzzles, weaving, etc and manipulating activities were common in preschool work. They comprised about 25 % of the observed time. Adult directed group activities like gatherings, reading time, etc comprised about 10 % of the time, the same as pretend play which was the most common activity which was not directed by an adult. In full time preschools, social interaction and play was as common as pretend play. Games with rules comprised 5-6 % of the time. Play with scale version toys was not as common as expected. Only 3-5 % of the time was devoted to this kind of activity. Nor was spontaneously structured and organized play particularly common among the observed 5-6 year old children.

Domestic activities comprised a comparatively large amount of time (5-8 %) in spite of the fact that the meal time and resting time was not observed. Large muscle movement activities was not as common as expected, only about 3 %.

During the observed 20 minutes the child changed play bouts about one or two times. Each bout thus lasted for 5 to 10 minutes. The variation was great, though, particularly during the first observation.

Differences in frequency of activities between full time and part time preschools

In both full time and part time preschools the activity pattern was characterized by an alternation between free and structured play. In the part time groups the weight was on traditional educational activities and in full time groups on social play or social interaction without play. The frequency of group activity and pretend play was about the same.

Comparisons between the two forms of preschool showed several differences in frequency among the different activities. In full time preschools the frequency of social play and interaction was twice as high as in part time groups (17 % and 8'%). Children in full time groups thus spent a great deal of their time in social interaction that was not connected to any particular activity. Children in part time groups spent more time in activities connected to educational tasks and material. All together about 40 % of the time was spent in these kinds of activities in part time groups compared to 27 % in full time groups (art, structured material, manipulation, 3 R's and games).

A clear difference was also found in the frequency of domestic activities. More time was spent in these kinds of activity in full time groups although meals and resting time was not included in the observation time. Domestic activities thus played a greater role in the full time than in the part time groups.

All together the frequency of "passive", non-goaldirected activities (waiting, movement, watching, etc) were about the same i full time and part time groups. These activities comprised about 15 % of the time. The most common activity among these was watching. What mental activity that was hidden behind this category was difficult to say. Seemingly the child was watching some other child or something that happened. If the child was day dreaming, was reflecting over something, studied what was happening or was attending something special was difficult to decide.

The frequency analysis showed that "watching" was more common in part time than in full time groups ($p < .001$ in obs 1).

In order to get a picture of the total pattern of activities in the two forms of preschool a ranking was made from more common to less common activities.

TABLE 4:2 The most common activities in full time and part time preschools (percentage of time in ranking order)

Full time preschools		Part time preschools	
Fantasy play directed	10.6	Art (not adult directed)	11.5
Social interaction	10.0	Fantasy play	9.9
Group activity	9.5	Group activity	9.7
Art (not adultdirected)	7.7	Watching	6.6
Domestic activity	7.5	Manipulation	6.2
Watching	5.4	Games with rules	6.1
Purposeful movement	5.1	Adult directed art & man.	6.0
Games with rules	4.6	Purposeful movement	5.8
Large muscle movement	4.0	Structured materials	5.7
Structured materials	3.9	Domestic activity	4.9
Manipulation	3.6	Social interaction (SINP)	4.6
Adult directed art & man.	3.4	Three R's activities	3.8
Three R's activities	3.4	Scale version toys	3.4

The largest difference between full time and part time preschools was found in the frequency of social interaction, non-play. This kind of activity was found to be proportionable much higher in full time than in part time preschools. The traditional "creative" activities dominated in part time preschools. The children in these schools thus take part in educational tasks and work with educational material to a larger extent than children in full time day care. In the day care environment children have more opportunities to interact with peers or personnel. They have thus greater opportunities to learn social rules by interaction with peers and grown-ups than children in part time groups. On the other hand, these were given more opportunities to learn to handle different kinds of educational material, do puzzles, paint, draw, weave etc. than to develop social relations.

The lower frequencies of goal oriented activities in full time groups was compensated by the longer stay. Due to this fact, all activities comprised more total time in full time than in part time groups. The average total time for different kinds of activities are shown in table 4:3.

TABLE 4:3. Total time in minutes for different kinds of activities in full time and part time preschools

	Full time	Part time preschool
Large muscle movement	14.4 min.	2.9 min.
Construction activities	15.5 "	8.5 "
Goal oriented activities (ART, MAN, ADM, SM, 3Rs)	72.2 "	60.1 "
Pretend and Scale version toys	47.5 "	24.0 "
Social play (IG, SSL, OP, SINP)	60.8 "	14.2 "
Games with rules, Group activity	55.3 "	27.7 "
"Passive" activities	55.5 "	30.4 "
Domestic activities	27.0 "	8.8 "
Total number of minutes	348.2 min.	176.6 min

As can be seen from table 4:3 some activities are proportionally more frequent in full time groups. Those activities are mainly social play and domestic activity. The total amount of goal oriented activities are almost the same, that is, about an hour on the average each day.

In total amount of time, social play and interaction without play was four times as common in full time compared to part time groups. Play comprising large muscle movement was also more common in full time groups. This may be due to the fact that children in full time groups spent more time out of doors than children in part time groups.

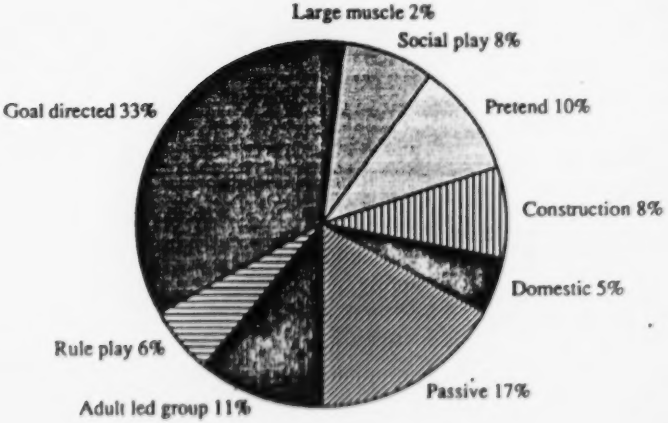
In all, full time children thus had more opportunities to learn about social interaction, to train their muscles and learn about domestic activity.

The larger amount of time spent by the full time children in these activities can be seen in relation to what part time children do during the time when they are not in preschool. Most of these children are at home or in family day care. Probably, some of those activities that are common in full time preschool are performed in a family environment. In what way the family environment corresponds to the preschool environment in this respect still has to be studied.

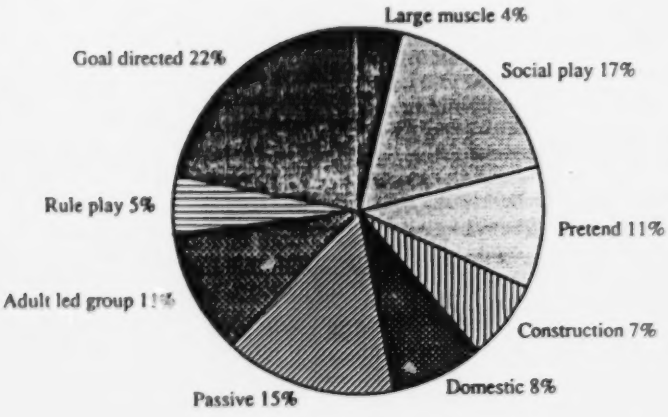
The results show that the educational structure in full time and part time groups has different centers of gravity. The activity pattern is presented in figure (4:1).

Distribution of activity

Part time preschool



Full time preschool



In relation to the overall pattern the activities in part time groups were centered more around educational material and adult direction. All together, on the average half of the time spent in preschool comprised these kinds of activities. About one third of the other half was spent in pretend play and social play while the rest of the time, about 20%, was "passive" time. Half of the time was thus occupied by educational activities that were planned and relied on professional knowledge of educational material. These activities often had a rather firm structure. In addition, the three hours duration of stay also made a tighter time structure. In all, the part time preschool can be regarded as a more educationally structured environment than the full time preschool.

In the full time preschool about the same amount of time was spent in child initiated activities (free play) as in goal oriented activities. The time spent in activities with a firm educational structure was relatively seen less and was more scattered during the day than in part time groups.Time pressure was thus less. Proportionally, more time was spent in informal play and social interaction than in goal oriented activities that demanded organized grouping for instruction or working together with the same material. This pattern was also accentuated by the fact that there were fewer children in the group and these did not have to be organized in larger or smaller groups in order to carry out the activities. Besides, the children were more scattered in age which led to the consequence that fewer children could work together with the same things. All these factors led to the result that task structure as well as time structure was less accentuated in full time than in part time preschools.

Differences between boys and girls in activity

In some activities boys and girls differed in frequency (see table 4:1). Boys had more constructive activities than girls. Both big and small scale construction was more common among boys than among girls. These results are in accordance with other investigations. Boys' interest in constructive activity in preschool and later in technical activity is well documented in both school and working life.

Boys were also more involved both in informal play and social rule play than girls. Boys were more engaged in both " rough and tumble" play and spontaneously structured play such as taking turns and plays with specified roles compared to girls. The frequencies of these activities were low but the sex difference was clear ($p < .001$ for Informal play and Spontaneous play). This fact can explain why we did not find any sex difference in Large muscle movement activity. The kind of social play that boys prefer usually includes large muscle movements. In our category system this type of activity was judged as social play as according to our judgement the social function dominated.

Girls were more occupied with art production both on their own initiative and under the direction of the staff than were boys. Girls drew, painted, and produced things with creativity and constructiveness more than boys in both full time and part time preschools. Boys were thus constructive in building things while girls were constructive in art production.

Boys were more active in using a particular type of material such as scale version toys and structured material than were girls. These activities mostly involved play with cars and things belonging to cars and doing puzzles. These activities were also more common in part time than in full time groups. Boys in part time groups were very often engaged in these kinds of activities.

An interactive effect of sex and form of preschool was found in the category watching. Girls in part time groups had a higher frequency of watching than girls in full time groups. This connection was not found among boys. Girls in part time groups were thus more occupied doing art work and were also more "passive", that is, watching, than the boys. These characteristics were also dominant compared to girls in full time groups who were not as passively watching as girls in full time groups. This gender pattern is supported by differences in language activity which will be dealt with later.

SOCIAL GROUP CONSTELLATION

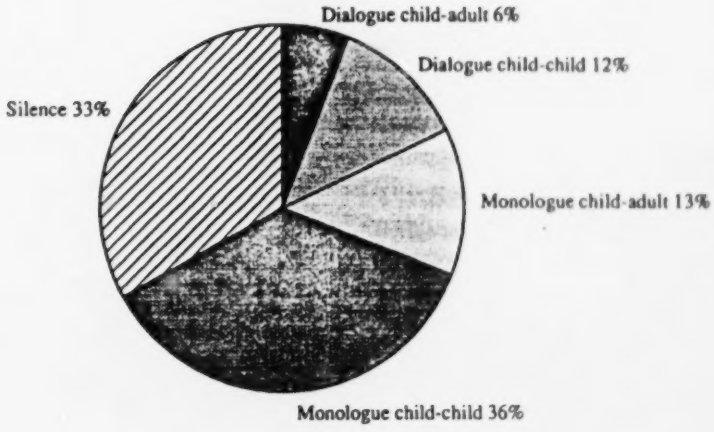
The frequencies of the social group constellation categories were calculated in the same way as the activity categories. The distribution of the categories are shown in table 4:4. The frequencies in full time and part time preschools are separated.

TABLE 4:4 Distribution of different kinds of group constellations (percent)

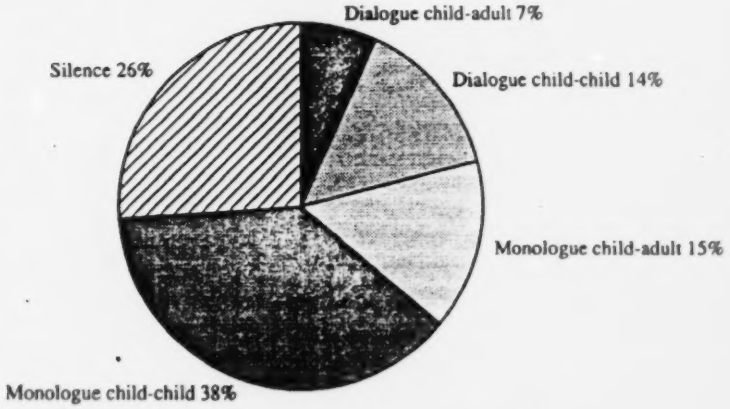
	Full time	Part time	Sign
No contact with personnel			
Alone	7.7	9.8	x
Pair	19.7	19.7	
Small group	20.4	20.1	
Large group	2.2	3.6	
Parallel pair	1.1	1.4	
Parallel small group	3.6	5.1	x
Parallel large group	1.0	2.1	x
Sum no contact with personnel	(55.7)	(61.8)	x
Contact with personnel			
Alone	1.6	1.1	
Pair	11.3	10.2	
Small group	11.3	7.4	x
Large group	10.0	9.8	
Parallel pair	0.7	0.6	
Parallel small group	4.3	3.3	
Parallel large group	5.0	5.9	
Sum contact with personnel	(44.1)	(38.2)	
Total sum	99.8 %	100 %	

Distribution of language activity

Part time preschool



Full time preschool



Generally most activities were performed in pairs or small groups (3 - 5) children. Activities in these group constellations appeared in 2/3 of the time. About 15 % of the time was spent in parallel activities in small or large groups. Preschool children at this age thus prefer to be together with one or just a few peers.

In about 40 % of the time children had some kind of contact with a staff member. When the grown-up participated in or directed an activity this was done in groups of children or in parallel activities. This implicated as a rule that the grown-up had gathered the group for some specific activity or the children were occupied with activities of the same kind but were working by themselves directed by the adult. The participation by the adult thus implicated that the activities became more group and task oriented.

Thus it was more common that children were active WITHOUT contact with the staff than WITH the staff. When children were active on their own they were together either in pairs or small groups. Play in large groups without a grown-up was not very common (3% of the time).

Also in the frequencies of group constellation some differences between full time and part time preschools were found. Children in full time preschools had more contact with grown-ups than children in part time preschools on the whole. This difference appeared mostly in small group activity that in full time preschools occurred more in company with adults than in part time preschools (11 % and 7 % , $p > .05$). There was no difference between full time and part time preschools as to the frequency of individual contacts between ONE child and ONE grown-up.

In full time preschools the staff was thus more often together with the children in small group activity but not with individual children compared to part time preschools.

Differences in activities that occurred without contact with grown-ups were also found. Children in part time groups were more often active in parallel situations or alone without contact with adults (19 % compared to 13 %, $p>.05$). This shows that children in part time preschools were more task oriented than children in full time preschools who were more active by interacting with one or a few peers. The social group pattern showed that the educational work in part time preschool was more like that in school, that is, the children worked individually or parallel doing the same kinds of tasks.

Generally it was found that the social group constellation was relatively similar in the two forms of preschool, that is, most of the activities occurred in small groups whether they were initiated by the personnel or the child. The social group organization was thus more influenced by group dynamic factors than by the direction from the grown-ups. Calculated in total time children in full time preschools had contacts with a grown-up in 44 % of the time, that is about 160 minutes during the 6 hour period that the observations represented. In the part time preschool the children had contact with a grown-up in 38 % of the three hours that the children spent their time in preschool, that is, about 70 minutes. The percentage distribution of this time between the different forms of group constellations was about the same in the two kinds of preschool except small group activity in contact with personnel which was more common in full time preschools. This shows that the way of organizing and directing the educational work was relatively similar in the two forms of preschool. Some differences can be found, however. The fact that activities in part time groups occurred parallel or individually in significantly higher degree than in full time groups can be interpreted as a sign of a higher degree of educational structure, that is, more task orientation, more use of material and more individualization.

DIFFERENCES BETWEEN BOYS AND GIRLS IN GROUP PATTERN

Differences between boys and girls were found in group pattern just as in activitity pattern. Overall the results showed that girls had more contact with the staff than boys ($p > .001$). This difference appeared most clearly in parallel activity in big groups under the supervision of the staff where girls were more often found compared to boys ($p > .05$). This implicated that girls more often than boys were occupied by activities initiated by the personnel without cooperation with other children. This result can be related to those differences we found in activity pattern, that is, girls spent more time in art and creative work on their own and under the supervision of the staff.

Boys played more in big groups without contact with the staff than girls ($p > .001$). This was more common in part time groups where more opportunities for play in big groups were available as there were more children and more children of the same age. The result can be compared with other studies showing that boys play more organized games with more participants than girls (Kvalheim 1980).

In some group constellations we found an interaction effect between form of preschool and sex. Girls had more individual contacts with the staff in full time preschools compared with boys while the opposite was true in part time preschools. that is, boys had more contact with the staff then girls ($p > .001$). This was also shown in the analysis of the language which showed that boys talked more than girls in part time groups. This can be compared with the interaction pattern i schools where it is shown that boys get more attention from the teacher than girls (Einarsson and Hultman 1984). The part time preschool is thus more like school than the full time preschool also in this respect.

The form of preschool thus appeared in certain aspects to have a differential effect on boys and girls regarding type of relationship to the personnel. Girls had more individual contacts i full time preschools and boys had more individual contact with personnel in part time groups. One general sex difference was found that appeared in both kinds of preschool. When children worked in big groups girls preferred to do so parallel to each other under the supervision of adults while boys preferred to be more on their own. As the analysis of the activity pattern showed that boys played more in both formal and informal groups this can be related to their preference for playing in big groups. The form and social structure of the preschool was thus shown to be related to gender. This was also supported by the analysis of the language pattern.

THE LANGUAGE IN PRESCHOOL

Children had some form of verbal contact with each other or with the staff during 70 % of the observed time on the average. About half of the communication occurred by way of single utterances, that is, the child talked to somebody or was addressed by somebody (monologue). During about 1/5 of the time there were conversations in the form of a dialogue. This consisted of a dialogue with another child in 13 % of the time and a dialogue with a grown-up during 7 % of the time. The distribution of different kinds of communication is shown in table 4:5.

TABLE 4:5. The distribution of time for different kinds of language communication

	Part time group	Full time group
Silence	25.4	33.2
Monologue child-child	37.4	35.7
Monologue child-grownup	15.9	12.8
Dialogue child-child	14.1	12.2
Dialogue child-grownup	7.2	6.1
	100	100

The frequency of language communication between a child and a staff member was greater in full time than in part time groups (22 % against 19 %, $p < .001$). The difference concerns language both in monologue and dialogue form.

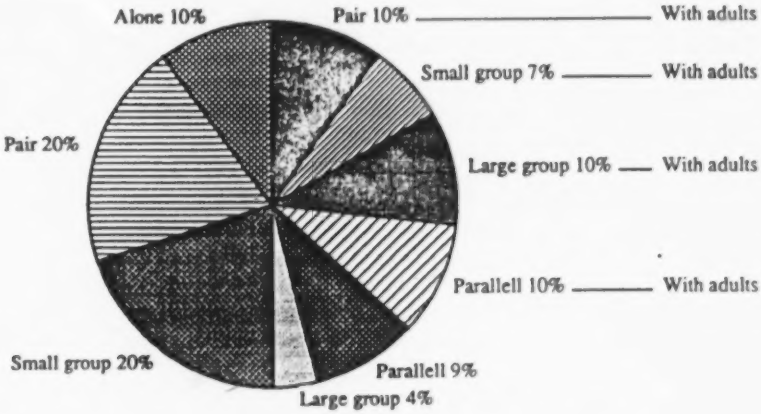
This can be regarded in relation to the activity pattern. The children in the full time preschool were more socially active which can be a reason for more verbal contact, compared to children in part time groups who were more task oriented. In regard to the fact that almost half of the children's activities were performed in interaction with adults both in full time and part time groups, it can be stated that the frequency of dialogue between child and staff was low (about 7 %). To what extent other factors, such as group size, staff-child ratio and other external factors influenced the frequency of dialogue between a child and a grown-up will be taken up later.

The analysis of the group pattern showed that the observed children had social contact with a staff member during about 40 % of the time. It is thus obvious that this contact not always meant that there was language communication between the child and the adult. The contact could mean that the adult organized and guided activities and in that case did not direct her speech to the observed child but to the whole group. This was not coded as language contact as it was not always clear if the child was attentive to what the adult said.

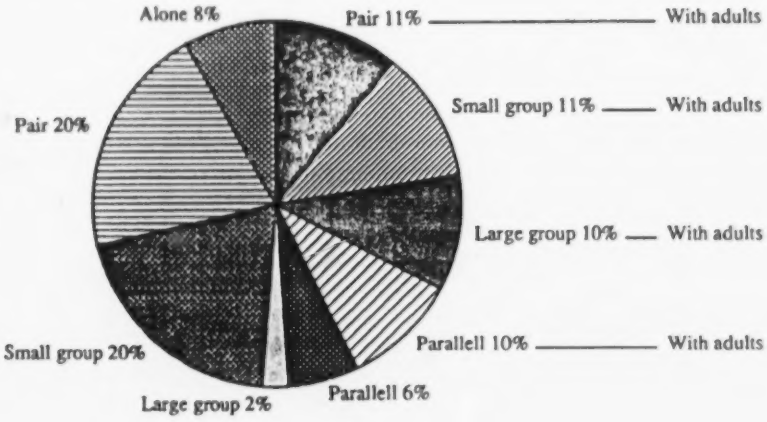
Language communication between children was found during about half of the observed time and was more common in full time than in part time groups (52 % against 48 %, $p < .001$). Only about 1/4 of this communication was in the form of dialogue. The frequency of dialogue between children did not differ significantly between children in full time and part time preschools.

Distribution of activities in different group constellations

Part time preschool



Full time preschool



Language differences between girls and boys

On the whole we did not find any differences between girls and boys in the amount of language communication. Girls in part time groups had fewer dialogues with other children compared to the boys but the difference was not significant. This result is in line with the fact that more children in part time groups were busy in parallel activities (the criteria for coding parallel activity was that there was no interaction).

However, girls and boys had different amount of dialogues with staff members in full time and part time preschools. Girls in full time preschools had considerably more often dialogues with staff members than girls in part time preschools. In boys the tendency was the opposite, that is, boys in full time preschools had fewer dialogues with staff members than boys in part time groups. This result is in accordance with the group pattern that showed that boys in part time groups had more individual contact with ONE adult than girls. In full time groups the opposite was shown, that is, girls had more contact with individual grown-ups than the boys.

The results of the analysis of the language pattern thus showed that children talked more in full time preschools (see figure 3). The form of preschool also influenced the language pattern differently in girls and boys, that is, the frequency of monologue and dialogue.

Girls in part time groups were more silent and, to be noticed particularly, had fewer dialogues with both other children and with staff members compared to both girls in full time groups and their male peers in part time groups. Girls in full time groups had the highest frequency of dialogues with staff members of all the children. This is in agreement with the interaction group pattern in which it was shown that girls in full time groups had more individual contact with ONE staff member than girls in part time groups.

Verbal contact between children and personnel

In a separate report an analysis of the verbal contact between the observed children and the teachers (personnel) was made. In this a more elaborated categorization was made than in the original study (Magnusdottir and Magnusdottir 1985). A random sample of 240 observations in 13 full time and 11 part time preschools was studied. The communication between children and teachers (personnel) was categorized in the following types:

INFORMING
STIMULATING
CONTROLLING
INSTRUCTIONAL

Each of these were divided into subcategories, e g which one took the initiative in the verbal contact, what answer the child was given, in what way the child was stimulated, how the teachers controlled, etc.

The results showed that in verbal contact between children and teachers (personnel) more often in a monologue than a dialogue form was used (73 % vs 27 %). In only one fourth of the occasions when verbal contact between the child and the adult was registered did the conversation develop into a dialogue.

Who took the initiative in the verbal contact?

In a little more than half of the observed occasions, the child took the initiative to the verbal contact. The most common form of verbal contact was information exchange, that is, the child either wanted to inform the teacher (personnel) about something or wanted to know something (65 % of the contacts). When the child told the teacher something it was just as common that the child got an answer as NOT getting an answer. However, when the child was seeking information from the teacher directly she/he usually got an answer.

STIMULATING the child through verbal contact was registered in 18 % of the observations. When the teacher tried to stimulate the child it was more common to do this in a cognitive activitity, e g make the child be more active in performing, than stimulating emotional expression.

A smaller part of the verbal communication was registered as control (11 %). The control was usually done in a positive way.

The smallest part of the verbal contact consisted of INSTRUCTION, that is, the teacher (personnel) instructed the child in some particular activity or behaviour (6 %).

STIMULATING and INSTRUCTING the child was more often done in dialogue form than informing and controlling the child which was usually done in monologue form. Informing and controlling contacts were thus judged to have less developmental value for the child.

A closer analysis of the contents of the different kinds of verbal contact showed that regardless of type of verbal contact between the child and the teacher, the conversation was almost always pertaining to the here-and-now-situation, that is, the conversation was about the child's on-going activity (90 %). It was thus very unusual that the conversation extended beyond the immediate situation treating things distant in time and space.

On the whole it was found that the different kinds of verbal contact were distributed with the same frequency in full time and part time preschools (Table 4:6).

TABLE 4:6 Frequency of different kinds of verbal contact between children and teachers (personnel) in full time and part time preschools (percent)

Category	Full time	Part time preschool
INFORMING	67 %	63 %
STIMULATING	16 %	20 %
CONTROLLING	12 %	11 %
INSTRUCTIONAL	5 %	6 %

Teachers in part time groups stimulated and instructed a little more than teachers in full time preschools. This can be seen in connection with the finding from the analysis of the content of the conversations in which it was found that in part time preschools the conversations were more often about things beyond the immediate situation while in full time preschools the conversations were more about the here-and-now-situation (13 % vs 6 %, $p < .001$). On the other hand it was shown that children in full time preschools more often got an answer when they were seeking information or addressed the personnel than children in part time preschools.

THEMES (BOUTS)

The average number of changes of theme in a 20 minute observation was 1.43 in full time and 1.36 in part time preschools, a difference that did not reach significance. The variation was great, however. We will come back to this later. Nor did the number of theme changes differ between girls and boys in full time or part time preschools.

TABLE 4:7 Average number of theme changes for boys and girls in full time and part time preschools

	Full time	Part time preschool
BOYS	1.48	1.43
GIRLS	1.37	1.33

SUMMARY OF COMPARISONS BETWEEN FULL TIME AND PART TIME PRESCHOOLS.

As shown earlier some activities were proportionally more common in full time preschools while other activities were more common in part time preschools. Social interaction without play, routine activities and gross motor movement were thus more common in full time groups. Art activities both with and without grown-ups, manipulation, play with structured material were more common in part time groups. The rank order of the frequencies of the different activities gave a picture of the educational pattern of the two forms of preschool by pointing out the main activities. In full time preschools social interaction and routines were given more time relatively speaking than in part time groups where art work and fine motor activities were more dominating. Fantasy play and group gatherings occurred by the same proportional amount in the two forms of preschool. Gatherings in small groups were however more common in full time groups while in part time groups all children gathered for common activities. It was also more common that children in these groups worked parallel while children in full time groups played more in small groups, often with a grown-up close by.

Children talked more in full time groups and had more communication with the personnel than children in part time groups. Two thirds of the communication were categorized as INFORMATIONAL in both kinds of preschool.

Altogether the results give a picture of the educational pattern in the two forms of preschool that reflects their function in society. The activities in the full time preschool accentuated the social interaction while the activities in part time groups were more educationally goal oriented. The differences in the length of time that children spent in the two kinds of preschool had the effect that the total time spent on goal oriented activities were about the same.

Girls and boys differed as to the frequency of some activities. As shown in most other studies on sex differences our results showed that boys spent more time on construction activities. They also spent more time in social play both with and without rules. Boys tended to play more in large groups than girls. Boys also played more with small version toys, mostly cars. This was particularly common in part time groups. Girls were more engaged in art and creative activities both alone and together with grown-ups.

The educational pattern influenced girls and boys in different ways. Girls in part time groups were more silent, they received less attention from the staff and interacted less with other children than girls in full time groups. They also tended to be more passive. Girls in full time groups got more attention by the staff and had more dialogues with staff members.

This differential effect was not so apparent with the boys. In part time groups boys got more attention from the staff members than boys in full time groups.

The following table gives a summary of the relative differences between girls and boys in full time and part time preschools.

Full time preschool	Part time preschool
More gross motor activity	More art work with or without adults
More informal play	More fine motor activity
More social interaction without play	More play with structured material
More domestic activity	More watching (girls)
More group play near grown-ups parallel	More activities alone or parallel
More verbal communication	

GIRLS	BOYS	GIRLS	BOYS
More dialogue with staff	Less individual contact with staff	More silence	More individual contact with staff

The number of theme changes during the 20 minutes observations were the same in both kinds of preschool and the same for girls and boys.

PEDAGOGICAL PATTERNS

Is there any relationships between type of activity and form of communication? Type of activity and group structure? Is for example dialogue between a child and a staff member more common in certain types of activities or group constellations than in others? What type of activities is more common in small groups, in pairs or in big groups? In what type of activities do children develop the language into dialogues? In what kinds of activities do children have contact with the staff?

As is shown in this study the work in preschool is characterized by a balance between teacher directed and child initiated activity. This structure reflects a traditional preschool teaching pattern showing a dynamic interplay between these two poles.The way of creating "order" in the preschool "ecological" system is depending on many factors. The need of the personnel to create "order" is according to the Swedish anthropologist Billy Ehn (1983) apparent in day care centers. This need is expressed in the regularity of the caring routines which, according to most studies, have an outstanding place in the work in day care centers. Rules and norms are necessary parts of the need of the personnel to create order. The need of order characterizes the preschool as a system to a high extent. The group organization is an important steering factor for goal directed work, particularly in large groups of children. The language communication is regarded as another steering factor in the form of dialogue pedagogics, a concept that was launched in the beginning of the 70ies in an official report from the National Commission on Child Care that had great influence on the educational practice in preschools.

The term structure can be perceived in many ways. Often structure is perceived from the view of the teacher, that is, steering is imposed from the grown-up. Child initiated steering, which should characterize the work in preschool according to official documents, is not described and analyzed as often as those structural factors that influence the educational work of the teachers.

Initiations of activity by the child and the personnel occurs in dynamic interaction.The lack of initiations by the personnel may lead to the effect that initiations increase in the group of children. Child initiations, for example in the form of their own group organization and through their own initiatives and activity may develop when the direction of the personnel decreases. The results show that in these cases the dialogue between children and personnel is an important factor directing the content, that is, ideas and themes.

What structures can be found in the pedagogical pattern appearing in the observations?

To shed light on this question the frequencies of each activity, group constellation and language category were correlated. Separate correlations were done for the first and the second observations. These correlations were factor analysed. A number of factors appeared which were the same for the two observation periods on the whole. A general view of the results of the factor analysis shows that it was mainly the language and the group constellation categories that had loadings in the factors that appeared. Of all the activity categories it was only group activity and other kinds of staff directed activity and pretend play that reached significant loadings in those factors that were possible to interprete.The pedagogical pattern could thus be construed by the factors personal vs child initiative, type of language communication and social group constellation.These dimensions characterized the pedagogical pattern.

Four interpretable factors could be separated.

I Activities organized by the personal vs initiated by the children
II Group organization vs individualization
III Steering by language vs material
IV Floating around, passivity

FACTOR I LARGE GROUP ACTIVITY ORGANIZED BY THE PERSONNEL VS INITIATED BY CHILDREN

Large group activity comprised gatherings like reading to a group of children, organized play and tasks that were performed under the direction of the personnel. This type of pedagogical activity was often accompanied by much communication by the grown-up in the form of monologues, that is, instructions, requests, etc. It also comprised work with individual tasks which were done parallel. This had the consequence that children sometimes had to wait for their turn to get help from the teacher. In this matter the pedagogical pattern reminded of the school.

The opposite of this large group activity was small group activity initiated by the children themselves. In this there was a great deal of dialogues between the children. The children directed their own activities by language communication. No particular kinds of activities were connected with this child initiated pattern. The fact that children were engaged in an active way in this pedagogical pattern was shown by the result that there was less movement on the average, that is, the children stayed in the same place during the activities

The following categories had significant loadings in factor I

FACTOR I GROUP DIRECTION BY ADULTS VS CHILD INITIATION

Activities led by personnel	Activities initiated by children
Group activity (gathering organized play)	Activity in small groups or reading, pairs without adults
Large group and parallel activity with supervision	
Monologues dominate	Dialogues dominate

II. GROUP CENTERED VS INDIVIDUALLY CENTERED ACTIVITIES

Centering on the group was mainly shown in the form of child initiated small group activity which most of the time consisted of fantasy play. In this kind of activity there was a great deal of dialogues between children. The children exchanged thoughts, talked to each other and discussed in the play. The activity was directed by the children's communication and their own organization most of the time. Group and parallel activity led by the personnel also belonged to this pattern. One pole was thus characterized by centering on the group and the other pole by centering on the individual child.

Centering on the individual child was mainly shown in the form of individual contacts between children and grown-ups, often in language contact by dialogue. Social interaction and contact dominated. Some "playing alone" was also connected to this factor. The emphasis was on individualization. The personnel talked to individual children in social interaction without play. This type of pedagogics is an example of the "dialogue pedagogic" method which was strongly recommended in Swedish preschool practice in the beginning of the 70ies.

Both poles in this factor were characterized by a "dialogical", individual and personal atmosphere but with different loadings. One of the poles was dominated by personnel direction, the other by child direction. The following categories had significant loadings in factor II.

FACTOR II GROUP VS INDIVIDUAL CENTEREDNESS

Activity in small group with and without personnel	Dialogue with personnel
Fantasy play	Individual contact child/personnel
Group and parallel activity led by grown-ups	Social interaction without play
Dialogue between children	Playing alone Manipulation

III. LANGUAGE CENTERED VS MATERIAL CENTERED ACTIVITY

Typical for the positive pole in this factor were language dominated activities. These were often organized and led by the staff and consisted most often in the form of doing paintings or other creative activities. Sometimes the activities were performed parallel, many children doing the same thing. The activities were accompanied by speech in the form of both monologue or dialogue between the children and the adults. When there were many dialogues the creative activities were mixed with social interaction without play. Monologues were mainly used in group activities led by the personnel.

The opposite pole in this factor was characterized by child initiated activity in pairs or individually. Play in pairs were closely associated with dialogue between the two children and could be associated with interaction around some common material. The following categories had significant loadings in factor III

FACTOR III LANGUAGE CENTERED VS MATERIAL CENTERED

Amount of language activity	Activity in group
Dialogue child-adult	Parallel small group activity
Small group activity with and without adults	Playing alone
Creative activity led by adults	Parallel activity without adults
Social interaction, non-play	
Informal play	Play with small toys and structured material

IV. FLOATING AROUND, PASSIVITY

This factor had only one dimension. It was characterized by "passive" activities like watching, floating around, goal directed movement and looking for something to do. This type of behaviour often occurred when the child was alone or parallel with small group activity. Large muscle movement was included in this factor. What mostly characterized this factor was a large number of different themes, that is, they did not seem to be directed by any idea or thought, nor were they directed by adults in the form of language, material or group organization. There was a lack of both inner and outer structure. The only factor found in the opposite pole was rule directed activity like play with rules. This kind of activity had long themes in contrast to the activities in the opposite pole. The following categories had significant loadings in factor IV.

FACTOR IV DIVIDED ATTENTION

Many changes of theme
Watching
Floating around
Looking for something to do
Playing alone or parallel
Goal directed movement

RELATIONSHIP BETWEEN LANGUAGE AND ACTIVITY

An important goal of the preschool is to develop children´s language. For preschool children language is an important part of social interaction as well as cognitive development. In dialogues between children and between the child and an adult the child learns to transform ideas and thoughts into words. For preschool children words are strongly associated with behaviour. Language and activity are closely connected with each other.

The results showed that the children were verbally active during 70 % of the time. Children in full time preschools talked more than children in part time preschools.

What in the day care setting make children more language productive than in the part time setting?

In the correlation analysis we found that play in pairs and small group was favourable for language production. Children talked a lot when the staff did not take part in the activities. But it was also found that the presence of personnel increased language activity.

Activities most connected with language production were fantasy play, rule play and social interaction without play. These were all characterized by high social interaction. This kind of activity was twice as common in full time as in part time preschools which may explain the higher language frequency in full time preschools.

To show light on the importance of the ecological factors for language production we found out in what situations children were silent. Children in full time preschools were silent in 1/4 of the time and children in part time preschools in 1/3 of the time. When were children silent?

The activity most connected to silence was adult led group activity but the connection was not very high. The children talked a little less in this kind of activity than in others. It is the adult who conducts the talk in these situations. Like in school, children should be the ones who listen. But even in adult led activities did the children talk a great deal.

About 1/5 of all language production consisted of dialogues between children or between children and adults. What situations that are particularly favourable for the development of a dialogue?

The following situations were connected to the presence of dialogues between children:

Many dialogues	Few dialogues
Pretend play	Group activity
Rule play	The three Rs
Pair without an adult	Parallel activity
Small group without an adult	Small group with an adult
	Pair with an adult
	Playing alone

Dialogues between children developed most often in pretend play and rule play. These activities were conducive to language production. In pretend play the children developed a theme that was to be shaped in fantasy. Children discussed what they were going to play, what roles each one would have, what action would ensue, what things were needed, etc.

In rule play dialogues often arose about the rules of the game and how they would be practiced. Social rules like taking turns in the game were often discussed, who won and who lost, etc. Many children learned to count and to handle mathematical concepts through dialogues with other children.

The dialogues between children increased when adults were not involved, while the absence of dialogue often was connected to adult led activities. Even in activities where children were busy with reading, counting or writing we found that dialogues seldom occurred.

Activities where dialogues between children were sparse were often carried out parallel or in groups supervised by an adult. The content of these activities could be e g reading to the children. Children listened more than talked in these situations.

Dialogues between children and adults were most often connected with social interaction without play. These types of situations were conducive to the development of conversations between children and personnel. As social interaction was considerably more frequent in full time than in part time preschools it could be expected that dialogue between children and adults would be more common in full time groups but this was not the case. Thus it was not the *time* for interaction that was most important.

The group constellations that were most favourable to dialogue between children were primarily individual contacts but also the presence of adults in small group activity.

Conversation with adults could also take place in parallel activities in connection with work in small groups. Situations in which adults were together with children individually or in small groups were thus more favourable for dialogue than being together in big groups. Activity in big groups was not connected with dialogues between children and adults but neither was it connected with silence. Dialogue in a big group may be a way for children to "listen in" and pick up knowledge in dialogues between other children and grown-ups.

Dialogues between children and adults were hardly ever connected to pretend play and play with toys. In these, the children themselves or the material directed the activity. Adults were seldom engaged or hardly ever discussed with the children in these kinds of activities.

The results indicate that there were differences in the language pattern between full time and part time preschools. Is language production connected to different kinds of activities in the two forms of preschools?

In a separate study that was made in connection with the project the language contact between the children and the personnel was analysed (Magnusdottir and Magnusdottir 1985).

The results showed that there was a significant difference in the connection between language contact and type of activity in the two kinds of preschool as shown in table (4:8).

Table 4:8. Percentage of communication between children and personnel in relation to different activities and form of preschool

ACTIVITY	FULL TIME	PART TIME
Domestic activity	14	5
Group activity	13	8
Social interaction, non-play	11	11
Structured material	7	5
Art	7	10
Purposeful movement	5	7
Watching	5	6
Rule play	5	5
Adult led art and manipulation	5	6
Manipulation	4	5
The three Rs	4	5
Organized play	4	0
Pretend play	3	5
Small scale construction	2	5
Various activities	11	11
Sum	100	100

Chi square = 61.82 p<.001

The results show that communication between children and adults in full time preschools was more common in domestic situations, group activity and organized play than in part time groups. In these, communication was more common in 3 Rs activities and art work. The communication in social interaction was the same in both kinds of preschool.

Language contact thus differed most in those kinds of activities that were more typical for the function of the form of the preschool. In full time preschools it was almost three times as common that the personnel used domestic situations to talk to the children as in part time groups. Instead, the personnel in these used reading and writing activities as situations for conversation. Art activities in part time groups were also more characterized by language contact than in full time groups in which conversation was more common in group activities. These usually included fewer children than in part time groups. Thus both function and organization reflects what kinds of situations are used for talk and discussion.

In part time groups educational activities were the focus of conversation. In full time groups domestic activity and group work were the kinds of situations that made children and personnel talk and discuss with each other.

These results are supported by the distribution of communication in different group constellations as shown in table 4:9.

Table 4:9. Percentages of language contact between children and personnel in different kinds of group constellations in full time and part time preschools

	Full time	Part time
Child alone	7	8
Pair child-adult	37	44
Big group (5 or more)	27	15
Small group (less than 5)	29	33
	100	100

Chi square = 56.57 (p<.001)

In full time groups language contact between children and personnel was most common in large group situations, which usually contained fewer children than in part time preschools. This situation was often used to exchange ideas and discuss things in full time preschools where there were few children in the groups and thus there were more occasions for each child to talk to the teacher.

In part time preschools the language contact was more common in pair and small group situations. The personnel talked to children individually or when they were active in small groups. The teachers in part time preschools directed their talk to one or a few children in contrast to the teachers in full time preschools who directed their talk to children when they were gathered in groups of about 5-10 children. In spite of the fact that the staff/child ratio was lower and there was a larger group size in the part time preschools the language contact was more individual in these.

By summing up the results the conclusions can be,drawn that activities directed by the children´s own fantasy, by structured material or interaction with the personnel were more verbally stimulating than group activities led by adults. Children talked most in group interaction both when they played on their own or interacted with the personnel.

Dialogue between children were favoured most by activity in pair or small groups without personnel. Pretend play and rule play also stimulated children´s verbal interaction a great deal. Adult-led activity was the least favourable situation for dialogues between children. Dialogues between children and adults were most common in pair and small group interaction. The dialogues were most developed in informal situations.

The language contact between children and personnel was most often connected top domestic and group activity in full time preschools and in part time preschools to traditional "educational" and creative activities like art, painting but also to reading and writing. This result is supported by other results in the present study that indicate that the full time preschool has a more clear social function than part time preschools in which educational activities carried out alone or in small groups get an apparent verbal significance.

CHAPTER 5

RELATIONSHIP BETWEEN THE CHILDREN'S ACTIVITIES AND STRUCTURAL CONDITIONS IN THE ORGANIZATION OF THE PRESCHOOL

FINDINGS IN THE OXFORD STUDY

One purpose of this study was to relate children´s activities, language and social group constellation to structural factors.
A division of these was made into institutional and personal conditions.

Earlier research indicates that such factors as staff/child ratio, the size of the preschool establishment, availability of preschool places, social conditions of the preschool area, etc influence the educational work in the preschool in different ways.

In what way these structural conditions influence the educational work and how this influence in that case can be explained is an area that is only studied to some extent. Explicit hypothesis have therefore not been formulated.

Data from the Oxford study show that in preschools with high staff/child ratio (one adult to 5-7 children) it is twice as common with creative and goal oriented activities as in preschools with low staff/child ratio (one adult to 8-10 children). In these it was more common that children were involved in social activities or fantasy play. It was also shown that the staff/child ratio was related to the number of activities with high challenge, the higher the staff/child ratio the more challenging were the activities rated. It was also found that the frequency of dialogues between children and adults was higher in preschools with high staff/child ratio (Sylva et al. 1980, pp 160-161).

The size of the establishment was also shown to be related to the children´s activities. In big establishments (more than 26 children per group) there was more large muscle movement activity and social play than in small establishments where the children more often were involved in pretend play. The play had a more challenging character in small establishments. The children also had more contact with adults in these (Sylva et al. 1980, pp 163-164). The results are not directly comparable with the conditions in the preschools studied here but indicate that organizational factors like number of staff and group size are parts of the ecological macro system that influence the children´s activities and the quality of the educational work.

How both cultural and structural conditions influence children´s activities was shown by comparisons made between preschools in England and Miami, USA (Sylva et al. 1980). The preschools in Miami consisted of many different kinds like cooperative playgroups, Montessori preschools, half and full day playgroups and kindergarten. They varied a great deal as to group size and staff/child ratio. Most of them had a considerably lower staff/child ratio than preschools in both England and Sweden. There were usually less material that stimulated pretend play and manipulation while the outdoor environment was rich and well equipped with sand cases, swings, tunnels, see saws and different types of climbing frames that often reminded of space rockets and similar things.

Comparisons between children´s activities in the Oxford study and Miami showed that the children in the Miami preschools were more passive, they were often standing and watching or wandered around aimlessly, were engaged in large muscle play or spent their time in social interaction. There were also more adult-led group activities than in the preschools in the Oxford study.

On the whole the educational structure was stronger in the Miami preschools than in the preschools studied in the Oxford study, both due to the structure of the material and a great deal of teacher direction. Preparation for school was greatly emphasized which often had the form of prepared material. This gave the children few opportunities for development of their own initiatives. The children had to perform certain tasks suggested by the teacher. These tasks could be challenging for some but not for others. Art and form tasks were often restricted by the teacher´s instructions or the material. The result showed that too strong direction and structure was inhibiting intellectual challenge as well as too little direction and lack of structure.

The ways of structuring the educational work varied a great deal in the Miami preschools. Three types of settings could be distinguished.

Parallel tasks.
The children did the same tasks during a certain and limited time.
Learning center.
The children could choose between different activities planned by an adult.
Individual projects.
The activity focussed on a planned theme that children and personnel developed together.

Regardless of what program that was used it was shown that the children in Miami spent much more time in parallel activity compared to both Swedish and British children. The Miami children spent 42 % of the time in parallel activity compared to 30 % in the Oxford study and 15-18 % in Sweden. As the size of the groups were bigger in Miami the staff got the role of organizers. The children in the group had to do the same tasks which had as a consequence more waiting and passivity for some children. In this respect the Miami preschools had a form and group structure that restricted the opportunities for individual contact both between children and child-adult. At the same time some children learned to be independent and to manage tasks on their own.

Just as in the Swedish and the Oxford study the most common pattern was that children cooperated in pairs and small groups without adult contact. Individual contact between a child and a teacher was relatively more unusual in Miami.

The comparisons between preschools in Miami and Oxford showed that the organizational structure, for example group size, staff/child ratio, etc influenced the children´s activity pattern, possibilities to contact and language exchange with other children and adults more than the goal of the program.

In the following part we are going to show by help of statistical analysis how external factors influence the children´s choice of activities, group structure and language in the Swedish study.

CONSTRUCTION OF MAIN CATEGORIES

In order to economize the number of correlational calculations between background factors and measures of activity different categories are summed into main categories. These comprise the same categories as in the Oxford study as direct comparisons thus can be made. The principles for the combinations have been to distinguish categories with different degrees of goal structure. In spite of the fact that the child´s goal cannot always be separated from the goal of the adult the aim has been to group together activities with loose goal structure and with strong goal structure. In activities with strong goal structure the aim is either built into the material or into the educational situation. In activities with loose goal structure the aim is not clearly evident for the adult but can be found in the children´s own world of ideas. Activities with different degrees of goal structure have been merged into the following main categories:

Activities with strong goal structure (ASS)
These comprise mainly the traditional educational activities such as painting, drawing, puzzles, games with rules, etc.

Activities with loose goal structure (ALS)
The child often takes the initiative or adjusts to the goal of the adult. In the Oxford study social play was also included in this category.

Activities with social play (ASP)
In our study these activities from a separate category

"Passive" activities (PA)
As in the Oxford study these are grouped into a main category comprising purposeful movement, cruising, waiting and watching.

Domestic activities (DA)

The combined categories are the same as in the Oxford study except group activity which in the Oxford study belonged to PA ("passive"). In our study it belongs to ALS (loose goal structure) as children often have a choice to join a group activity in Swedish preschools, such as reading time.

Activities with strong goal structure consist of
Large scale construction (LSC)
Small scale construction (SSC)
Art
Adult directed art and manipulation (ADM)
Structured materials (SM)
Three Rs activities (3Rs)
Problem solving (PS)
Games with rules (GWR)

Activities with loose goal structure (ALS)
Large muscle movement (LMN)
Manipulation (MAN)
Examination (EX)
Pretend play (PRE)
Scale version toys (SVT)
Music (MUS)
Group activity (GA)

Social play (ASP)
Informal games (IG)
Spontaneously structured play (SSL)
Organized play (OP)
Social interaction, non-play (SINP)

Passive activities (PA)'
Standing around (SA)
Cruising (CR)
Purposeful movement (PM)
Waiting (W)
Watching (WA)

The group constellation categories have been combined in the same way as in the Oxford study. Activities WITHOUT adult contact have been separated from activities WITH adult contact. Parallel activities have been separated from those performed in interaction in a group, pairs or alone.

Parallel activities WITHOUT adult (Pair/P, LG/P and SG/P)

Parallel activities WITH adult (PAIR/P, LG/P and SG/P)

Group constellation WITHOUT adult (ALONE, PAIR, SMALL GROUP and LARGE GROUP)

Group constellation WITH adult (ALONE, PAIR, SMALL GROUP and LARGE GROUP).

The language categories are the same as those in the original analysis, that is

0 = No language spoken
M =The child talks to or is talked to by other children or an adult in the form of monologue
DC = Dialogue between children
DA = Dialogue between a child and an adult

The frequencies of each category in the two observations have been added for each child. The frequencies of the added sums have been used in the comparisons. These frequencies are regarded as dependent variables in the analysis and the background variables as independent variables.

RESULTS

The relationship between background data and pedagogical pattern have been calculated with variance analysis method. For this purpose the background factors were divided into groups. Comparisons are made between preschools. Full time and part time preschool are usually separated in the analysis.

Generally it was shown that full time and part time preschools differed in a number of the combined categories in a non-random way. The result support those differences that were found in the analysis of the original categories as reported in the preceding chapter. In full time preschools there was proportionally less goal directed activity, more social play and interaction and more domestic activity. The combined category ALS (loose goal structure) did not differ between between full time and part time preschools, however.

As in the analysis of the separate categories comparisons of group constellations showed that children in full time preschools had proportionally more contact with adults and less parallel activity than children in part time preschools. Comparisons of language activity showed that children in full time preschools talked more than children in part time preschools.

CHILD OBSERVATIONS IN CITY DISTRICTS, TOWNS AND VILLAGES

In Sweden there is a higher availability of full time preschools in cities than in in other parts of the country. This is shown in the following table 5:1.

TABLE 5:1 Average number of available places in full time preschool per 1000 children 0-7 years of age in the studied municipalities

	Number of municipalities	Average number	Variation
City	4 districts	243	-
Towns	11	148	89-219
Villages	8	114	68-154

Degree of urbanization has a clear relationship to availability of full time preschool places.

Is there any correlation between the availability of full time places and the pedagogical pattern? Does availability influence the working methods? Is there a relationship between the social background of the children and availability of places? Does this influence the expectations of the parents in that case? What importance does this have for the pedagogical work? Measures of correlation may give some indications of possible relationship although these may be of a complicated nature.

The number of observed children in the different areas of urbanization is shown in table 5:2.

Table 5:2 Number of observed children in full time and part time preschools in different areas of urbanization (Number of preschools in parenthesis)

	Full time		Part time		
	Number of children		Number of Children		Total Number
City districts	192	(40)	90	(18)	282
Towns	114	(24)	82	(17)	196
Villages	40	(8)	36	(7)	76

In order to control other background factors that could be related to the degree of urbanization comparisons were made between preschools in the different areas as to size of establishment, staff/child ratio, number of priority children etc.

We found some relationships between the structure of the preschools and degree of urbanization but the differences did not reach statistical significance level. For example were full time preschools situated in big establishments more often in the city districts and towns than in villages. In the city districts it was more common that the full time preschools were situated in areas with tenant flats and there were also more areas with high rates of social problems.

Full time preschools in villages had more children in the groups, some of these were part time children, however. In the villages it was also somewhat more common to have children up to 10 years old in the group. Many of the children in the village preschools lived outside the area where the preschool was situated.

Comparisons between areas with different degrees of urbanization showed a number of interactive relationships, that is, differences that referred only to full time or part time preschools. Most remarkable were the differences between preschools in villages compared to towns and city districts. These results could be interpreted as differences in the function of the preschool.

For example, part time preschools in towns had much fewer priority children than in city districts and villages. In 70 % of the part time preschools in towns there were no priority children as compared to 30 % in the city and village part time preschools.

Clear differences appeared in the language and activity pattern between full time and part time preschools in the towns that did not appear in the city districts and villages. The results indicate that full time and part time preschools have clear different functions in towns that did not appear in city districts and villages. The following characteristics of the two types of preschool give a picture of the part time preschool as preparing for school while the full time preschool functioned as a social environment.

PART TIME PRESCHOOLS IN TOWNS had less social play and interaction. The activity pattern was dominated by more task oriented activities. This was reflected in the amount of contact between children and adults and in the language pattern. The children were active on their own. They were more silent than children in city districts and villages which was shown in fewer number of dialogues between children ($F= 4.70$, $p < .001$). There were fewer changes of themes which indicates that the children were active with the same kind of content for a long time such as gatherings or other regular activities.

The part time preschools situated in towns were thus more task oriented and had more "school like" forms than part time preschools generally. The children talked less with each other and dialogues between children and adults were not as common as in part time preschools in city districts and villages.

FULL TIME PRESCHOOLS IN TOWNS were characterized by another pattern. The children were more often involved in social play and interaction without the presence of adults. This can be seen in relation to the pattern in the part time preschools where social play was sparse and the children were more involved in different tasks.

In contrast to the children in part time groups the children in the full time groups were more talkative and had more dialogues with each other. There were also more changes of themes, particularly during the morning session which indicates that there was more of free play during this time. Thus the children changed activity often and played more on their own. This was connected to a larger amount of language exchange.

Altogether we got a picture of the full time preschool in towns as an social environment characterized by a great amount of free play where the children are given many opportunities to take their own initiatives and have quite a few discussions but have fewer adult-directed activities.

From a structural point of view the full time preschools in towns did not differ in a systematic way from full time preschools in city districts and villages. They had about the same amount of priority children on the average as full time preschools in other areas. They were not situated in social problem areas as often as in the city districts but this was neither the case with the village preschools. There was a high turnover of personnel but this was also the case in the city districts.

The results indicate that full time and part time preschools had more differentiated functions in towns than in city districts and villages. The part time preschool had a stronger task orientation which indicates that the pedagogical pattern has a traditional kindergarten structure and has in this way a school preparing function. This may be accentuated by the fact that there were mostly 6 year old children in the groups.

The full time preschools had a clearly marked social function. This was probably accentuated by the fact that the groups consisted of children in mixed ages, that is, children between 1 and 6 (70 % as compared to 33 % in city districts).

The results indicate that it was common that the children in towns moved from full time to part time preschool when turning 6 because of its school preparing function. Thus there were only few 6 year olds left in full time preschools which might have resulted in fewer structured activities and more free play. There was a high staff/child ratio which resulted in a large amount of talk between children and adults and the children also talked more with each other than in the part time groups. Discussions were also favoured by the fact that the children´s activities were directed by their own initiatives. Generally the pedagogical pattern was characterized by less adult direction than in part time preschools.

Interesting differences between full time and part time preschools were also found in villages.

FULL TIME PRESCHOOLS IN VILLAGES had a pedagogical pattern that was similar to the pattern i towns but differed from these in the amount of communication. On the whole children talked less in full time preschools in villages, both to each other and to adults. The personnel were close to the children but did not talk so much with them as in full time preschools in towns and city districts. In contrast to this it was found that children in PART TIME PRESCHOOLS IN VILLAGES talked as much as in towns and cities. Part time preschools in villages are regarded as a kind of school. The pattern in full time preschools reflects a more homelike atmosphere. The sparse communication may be an effect of cultural conditions. People in the country are not as communicative as as people in cites and towns.

It can thus be stated that the structure and function of the preschool in areas with different degrees of urbanization is reflected in the pedagogical pattern. The policies in different municipalities appearing in the form of mixture of ages in the groups, recruitment of children, has effect on the children´s activities and language. The correlations are complicated but the results indicate that the pedagogical work to some extent is influenced by the functions that the two forms of preschool fulfil in the community.

CHILD OBSERVATIONS AND SOCIAL PROBLEMS IN THE AREA OF UPTAKE

Empirical research and analysis on macro level on relations between children´s social background and their way of behaving in institutional environments such as preschool and school have been in focus in educational research during the last years. Research shows that children´s way of adjusting to the preschool environment is dependent on their social background. Tizard and her coworkers found for example that children in working class areas have more large muscle movement play and less symbolic play than preschool children in middle class areas (Tizard, Philps and Plewis 1976). Are there similar relationships in Swedish preschools?

The concept "problem area" was constructed by several different measures that characterized the area in which the preschool was situated as reported in the preceding chapter. These measures consisted of the following:
Average income of the inhabitants in the area
The frequency of contacts with social authorities
Frequency of unemployment
Frequency of immigrants living in the area

These measures were correlated to each other. Each of these measures were divided into three groups, high, middle and low. As the groups overlapped to a great extent three main groups were constructed by combining the frequencies of the different measures. The three groups were characterized as
HIGH problem area (low social status area)
MIDDLE problem area
LOW problem area (high social status area)

TABLE 5:3 Percentages of observed children in areas with high, middle and low frequencies of social problems

	HIGH	MIDDLE	LOW	TOTAL NUMBER
Full time	26	24	50	306
Part time	11	39	50	183

Full time preschool were more often situated in areas with more social problems (low status areas) while part time groups were more often found in areas with average number of problems (middle class areas).

As expected we found some correlations between different background factors such as frequency of social problems and degree of urbanization. As areas of social problems are usually found in cities it was natural to find that most full time and part time preschools in high problem areas were situated in the city of Gothenburg. Tenant flats were most common in these areas or small private houses and flats. Preschools in areas with low problem frequency were evenly distributed between city districts, towns and villages. In middle status areas part time preschool dominated, particularly in towns.

The conditions of staffing was relatively similar in the three types of areas. Full time preschools in the middle class areas differed however from areas of both high and low status by having less turnover of personnel. In these areas the staff/child ratio was also the highest.

TABLE 5:4 The frequency of high staff/child ratio (one adult per 3-5 children) in areas with different amounts of social problems

Social problems	High staff/child ratio
Most	35 %
Middle	57 %
Few	42 %

Full time preschools in "difficult" areas had the lowest staff/child ratio while the middle class areas had the highest number of adults per child.

The number of substitute teachers was about the same in the different areas and thus seemed to be independent of the status of the area.

The number of registered children full time was high in the areas with most social problems, 13.5 children on the average compared to 11.3 in the middle status areas and 13.3 in the high status areas. The lower average in the middle status areas is compensated by more children registered part time. In the middle class areas there were only 7-12 children registered full time but in almost all preschools there were also one or more part time children.

The number of children with social priority was about the same in all areas, about 1.5 children on the average. The number of children from single parent families were on the other hand twice as high in the areas with most social problems as in the other areas. It was also more common that the children in the low status areas lived close to the preschool.

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It was also found that the possibilities for further training was less in the preschools in the low status areas. Only 25 % of the preschools in these areas had some kind of in-service training within the establishment during the year before the study compared to 59 % of the establishments in the high status areas.

The full time preschools in the problem loaded areas thus had more full time registered children on the average and lower staff/child ratio compared to the middle and high status areas. Although the average number of priority children was not higher in than in other areas it may be presumed that more children came from problem families. The turnover of personnel was not higher but there were fewer opportunities for further training within the preschool. These conditions referred mainly to the city of Gothenburg where most of the problem areas were situated.

What did the pedagogical pattern look like in preschools situated in areas with different amount of social problems?

Interesting results were found that indicated interactive relationships between the pedagogical pattern the form of preschool. The differences were greatest in the areas with most problems. The results show different ways of "educational adjustment" to children with different social backgrounds.

The difference in pedagogical pattern between areas with various amounts of social problems was most evident in part time preschools. In the high status areas there was more adult-led and goal directed activity, fewer child initiated and fewer social activities in the part time preschools. In the problem areas (there were few part time preschools but all showed the same tendency) the pedagogical pattern was characterized by less structure compared to part time groups in other areas. There was more loosely structured activity like fantasy play and similar in which the child took the initiative himself. There were fewer goal oriented activities. At the same time the children were active doing things, there was less passivity but at the same time they changed activities often. The personnel had a higher amount of contact with the children than in part time groups in other areas. The number of dialogues between children and adults was also high in these part time groups.

CHARACTERISTICS OF PART TIME GROUPS IN

HIGH STATUS AREAS	LOW STATUS AREAS
More goal directed activity	More loose structured a (free play)
Fewer child initiated activities	More active behaviour
Fewer social activities	More change of activity
	More dialogues child-personnel
	More domestic activities

The results can be seen from the point of view that part time groups in low status areas all had groups of 17-20 children and sometimes many children with social priority. However, they all had some kind of extra personnel. They were all situated in Gothenburg.

In the full time preschools the relationship between social status of the area and the pedagogical pattern showed the opposite tendency. In these there was more passivity among the children the more problems there were in the area. The children were often active on their own without contact with any adult ($F= 3.25$, $p <.001$). This was supported by the result that there were few dialogues between children and adults. In relation to full time groups in other areas the children were less engaged in activities where they took initiative on their own. However, the observed children in the problem areas were found to be as engaged in structured activities as children in other full time preschools.

Domestic routines showed a clear relationship to social status of the area. On the whole there was more domestic activity in both full time and part time preschools the more social problems in the area ($F= 4.82$, $p <.001$).

CHARACTERISTICS OF FULL TIME PRESCHOOLS IN

HIGH STATUS AREAS	LOW STATUS AREAS
Few domestic activities	More domestic activities
More free play	More passive behaviour
More dialogue child-personnel	Few dialogues child-personnel

These results can be seen from the point of view that there were more children in the problem areas that needed special support due to family conditions. Usually the younger children need more help and care and thus the personnel had less time to attend to the older children who often manage by themselves.

The results show clear evidence that the social status is related to the pedagogical pattern in the preschool. In both full time and part time preschools there were fewer adult-led activities the more problem loaded the area. In part time preschools the contact between children and adults increased, however, as well as child initiated activity while goal structured activity decreased in these areas. This relationship did not appear in the full time preschools. The observed children in these showed a pattern that indicated that these children were "neglected". They were often left to themselves, they were passive and did not have much contact with the personnel.

Summing up the results the following pattern was shown in areas with the LOWEST SOCIAL STATUS

FULL TIME PRESCHOOLS	PART TIME PRESCHOOLS
	More loose goal structure
More passive behaviour	More active behaviour
Less contact with the personnel	More change of activity
Few dialogues with the personnel	More dialogues with the personnel
More domestic activity	More domestic activity

CHILD OBSERVATIONS AND SOCIAL PRIORITY

In the Swedish debate on preschool education it has often been taken for granted that it is not possible to work in the same way in groups with one or more "problem children" (socially priorited children) than in groups with only unproblematic children. From experience it may be presumed that in groups with children who have special needs more attention from the personnel has to be given these children and there would thus be less time for working with the group as a whole. The amount of contact between adults and "normal" children would be less in groups with one or more "special" children. For this reason groups with one or more priority children are often given extra resources in the form of fewer registered children in the group or an extra staff member.

In order to investigate the relationship between number of priority children and the activity pattern, group constellation and language communication we divided the preschools in two groups, one with none or one priority child and one with 2-8 priority children. The number of observed children and preschools in each of these groups is shown in table 5:5.

TABLE 5:5 Number of observed children and in full time and part time preschools with 0-1 and 2-8 priority children (Number of preschools in parenthesis)

	Number of priority children				
	0-1		2-8		Total
Full time preschools	207	(42)	109	(22)	316
Part time preschools	135	(27)	63	(13)	198

In half of the part time groups and 1/3 of the full time groups there was no priority child. About 15-20 % of both full time and part time preschools had 3 or more priority children. There were more priority children in the city districts and the villages than in the towns and suburbs. In contrast to our expectations there were no more priority children in the low status areas than in middle and high status areas.

It was found that children in groups with many priority children did not have less interaction with adults than children in other groups. The explanation of this may be the fact that placement of priority children was compensated by having an extra staff member or fewer children in the group. Our presumptions about differences in amount of contact was supported however by the finding that in groups with two or more priority children there was more parallel activity both with and without adults ($F= 3.91$ and $F= 6.53$, $p < .01$). The observed children in these groups thus played less in interaction with other children. They were involved in parallel activities both by themselves, near an adult or in contact with an adult. There was also less language contact. The children had fewer dialogues both with each other and adults. They were also more passive ($F= 4.15$, $p < .05$). Just as in social problem areas children in these preschools seemed to be "neglected".

These results can be compared to the findings that in groups with only one or no priority children. In these it was common that the observed 5-6 year old children played together and had more social interaction. This was common in both full time and part time preschools ($F= 5.53$, $p < .01$).

The same interactive relationship was found between type of preschool and pedagogical pattern as in the relationship between activity pattern and problem area. Personnel in full time and part time preschools "adjusted" their way of handling the children in different ways. In part time groups the teachers and nurses had a more active way of responding to the children. The adults had more dialogues with the children in groups with two or more priority children and the children were more active.

Differences in type of activity was not found, that is, the frequency of goal directed, self initiated activity and social play and interaction did not differ in groups with many or few priority children in neither full time nor in part time preschools. The amount of domestic activity, which was connected to degree of problems in the area showed no relationship to number of priority children.

Characteristic of the activity pattern in preschools with two or more priority children

FULL TIME	PART TIME
More parallel activity	
Few dialogues between children	
Few dialogues with adults	More dialogues with adults
More passivity	Less passivity

CHILD OBSERVATIONS AND THE AGE COMPOSITION OF THE GROUP

A state committee investigating preschools (Barnstugeutredningen) recommended age mixed groups. The motive for the so called sibling groups was the idea that children in age mixed groups are given opportunities to experience social learning situations through the formation of "sibling relations". This means that older children for example learn to help younger ones and that older children are models for younger children.

During the last years the idea of having too wide age spans in the groups has been questioned from an educational perspective. As has been reported in an earlier section of this study (part one) research shows that children in groups with children in different ages only mix to a certain extent and spend most of their time in activities that are typical for the age. The oldest children may get fewer opportunities to be prepared for the school start. Can these doubts be supported or rejected by the results in this study?

Full time and part time preschools were not fully comparable as to age composition of the groups as almost all full time preschools had children from 3-6 or 1-6 (in some cases up to 10 years of age) while 2/3 of the part time preschools had children between 4 and 6. Groups with just 6 year old children were more common in towns and villages while the groups with 4-6 year old children were usually found in the city districts.

Comparisons have been made between preschools with various age compositions. Full time and part time have been separated in the analysis.

TABLE 5:6 Number of observed children in full time and part time preschools in groups with various age compositions. (Number of preschools in parenthesis)

Ages	5-6		3-6		1-6		1-10		Total
	Number		of		children				
Full time	5	(1)	137	(26)	164	(33)	30	(6)	336
Part time	138	(26)	60	(12)	0		0		198

Full time preschools with children between 3 and 6 were more common in the city districts. There was no difference in age composition between high and low status areas.

Our results show that there was a relationship between age composition and the language pattern. Most clearly this was shown by the finding that the observed children in more age mixed groups talked more. The amount of dialogues with adults were particularly high in these groups ($F = 7.33$, $p < .001$). The difference was especially evident in part time groups. In these there were registered twice as many dialogues between children and adults in groups with 4-6 year old children as in groups with only 6 year old children.

In full time preschools the number of dialogues with adults and between children were particularly high in groups with very mixed age groups (1-10 years of age). Number of dialogues also tended to increase the greater the age span in the group. Groups with ages 3 to 6 and 1 to 6 did not differ significantly in number of dialogues.

The language communication thus showed a relationship to age composition. A wider age span in both full time and part time preschools was favourable for longer conversations both between children and between children and adults.

Was there any relationship between activity pattern and age composition?

There was no clear relationship between activity pattern and age composition in the group. There was a tendency, however, that a wider age span was related to fewer goal oriented activities and more social play and interaction. This was particularly obvious in full time groups with children between 1 and 10. These differed most from the rest by spending more time in social play and less time in goal oriented activities. As reported above there were also more dialogues in these groups which generally is associated with social play and interaction. The children also changed themes more frequently in these groups showing that they were less task oriented.

In part time preschools with children between 4 and 6 more time was spent in social play and interaction than in groups with 6 year olds. There was also more change in activity. No difference in number of goal oriented activities was found in part time groups with different age compositions.

On the whole the results support the pattern that was assumed to characterize a wider age composition in the group. In groups with a wide age span the observed children had more communication in the form of dialogues. They were also more involved in social play and interaction.

There was no relationship between age composition and amount of goal oriented activity except in the groups with very wide age span (1-10). In these there were fewer activities of this kind. No relationship was found between age span and group constellation. Pair and small group activity dominated regardless of age composition of the group.

CHILD OBSERVATIONS AND GROUP SIZE

As was shown in the preceding chapter, the group size was shown to have effect on the pedagogical pattern. More children in the group led to more social interaction between the children while contacts with the adults were fewer regardless of the staff/child ratio. Few children in the group did not automatically lead to more interaction between children and adults.

Comparisons between groups of different sizes was only made in full time preschools. These were divided into preschools with 7-12 and 13-18 full time registered children. This implicates that the comparisons are not quite adequate as some of the preschools also had part time registered children. As these children were present only part of the day or on certain days during the week we still judge the comparisons as relevant.

TABLE 5:7 Number of observed children in full time preschools with different group size. (Number of preschools in parenthesis)

Group size	7-12	13-18	TOTAL
Number of children	171 (34)	175 (35)	346

The results supported the presumptions that were made. The observed children in larger groups had more dialogues with each other and fewer dialogues with adults. It was more common in large groups that the children played by themselves without contact with an adult. The differences reach statistical significance level.

The analysis of the activity pattern showed that the children in the larger groups tended to spend more time in social play than children in smaller groups but at the same time there was also more passivity. No differences were found as to degree of goal structure. More domestic activity was found in small groups. This may be explained by the assumption that there were more "problem" children in these groups as the number of children often was cut down due to this.

Generally it was shown that the size of the group, within the observed limits, mainly was related to the language pattern. Groups of about 13-18 children thus seemed to stimulate conversations between children more than small groups. It was also more common that the children played together without contact with an adult.

CHARACTERISTIC FOR LARGE GROUPS IN FULL TIME PRESCHOOLS
(13-18 full time registered children)

More social play
More passivity
Less domestic activity
More dialogues between children
Less contact with adults

The frequency of goal oriented activity and "free play" did not differ between large and small groups.

The results can be compared to the findings from a study made by Smith and Connolly in British preschools. In these the groups sizes were on the whole larger than in the present study. Their results support our results to some extent as there was less conversation with adults in the larger groups but this was only true for the girls. They also found that children in larger groups had more table play and large scale construction but less fantasy play. There were also fewer conflicts and less watching than in smaller groups. These differences were not found in Swedish preschools.

CHILD OBSERVATIONS AND STAFF/CHILD RATIO

Results from studies made in preschools in Miami, USA, presented in the beginning of this chapter, indicated that there was a relationship between staff/child ratio and the pedagogical pattern. Groups with few staff members and many children have to be organized and directed in another way than groups with more adults per child. In the Oxford study it was shown that there was more interaction between children and adults the higher the staff/child ratio which may seem logical as the possibilities of more contact opportunities become greater. In the Oxford study it was also found that the activities were more challenging in groups with higher staff/child ratio. This is not a logical effect, however, as challenge is also depending on the teachers way of working with the children. A high staff/child ratio gives the personnel increased possibilities to individualize and to give each child more help to structure the tasks in order to make them more challenging for the child.

Comparisons between preschools with different staff/child ratios made in other countries are always based on smaller ratios than those that exist in Swedish preschools.

In our study the full time and part time preschools were divided into groups with high and low staff/child ratio. In full time preschools a large ratio meant 2-4 children and a low ratio meant 5-10 children per full time employee. The corresponding division in part time preschools meant 5-8 and 8-10 children per full time employee.

TABLE 5:8 Number of observed children in full time and part time preschools with high and low staff/child ratio. (Number of preschools in parenthesis)

	STAFF/CHILD RATIO		
	HIGH	LOW	TOTAL
Full time	140 (28)	197 (40)	337
Part time	94 (19)	104 (21)	198

It was shown that full time preschools with lower staff/child ratio were somewhat more common in villages and in areas with more problem children but the differences were not judged to influence the results presented here.

Our results were similar to those found in other studies, that is, there were clear differences pertaining to language communication and social contact but rather insignificant differences as to the activity pattern. Children in groups with high staff/child ratio had more dialogues with the adults. On the other hand, in groups with fewer staff members per child the children had more dialogues with each other. The results were the same for full time and part time preschools. In full time preschools with more staff members per child there was more talk generally than in other preschools.

These differences were supported by the results from the analysis of the social pattern. Children in groups with high staff/child ratio had more interaction with adults than children in groups with fewer staff members per child ($F = 3.74$, $p < .05$). This was found to be true for both small group and parallel activity.

On the whole no differences in activity pattern between preschools with high and low staff/child ratios were found. The tendency for preschools with high staff/child ratio to have more domestic activities was unexpected but can be explained by the fact that more problem children were connected to as higher staff/child ratio.

CHARACTERISTIC FOR GROUPS WITH HIGH AND LOW STAFF/CHILD RATIOS IN FULL TIME AND PART TIME PRESCHOOLS

HIGH STAFF/CHILD RATIO	LOW STAFF/CHILD RATIO
More dialogues with adults	More dialogues between children
Children talk more (full time p)	More activities without adults
More interaction with adults	
More domestic activity	

CHILD OBSERVATIONS AND SUBSTITUTE TEACHERS

The number of different substitute teachers and nurses in a group can be seen as a measure of the stability of the staff. Usually ordinary personnel is substituted during absence. The number of absent days was on the average higher in full time than in part time preschools. How does number of substitute personnel influence the pedagogical situation?

The problem of absence among personnel can be solved in different ways. Usually this is done in cooperation between the preschool and the social administration. During the last years it has become common to employ substitute personnel on a long term basis. A whole district may thus be served by the same substitute persons. This implicates that there is more chance to get the same substitute person on different occasions. As there is a shortage of preschool teachers and nurses the substitute person is usually not a trained preschool teacher or nurse. This may have the effect that the pedagogical work is influences both by the fact that she does not have enough competence and experience working with children and also that the children do not know the substitute person.

Information was obtained on the number of DIFFERENT substitute persons that had worked in the studied groups during the two months period during which the observations were made. The preschool groups were divided into those which had employed at the most one substitute person and those which had employed two or more.

TABLE 5:9 Number of observed children in full time and part time preschools with 0-1 and 2-6 different substitute persons (Number of preschools in parenthesis)

	Number of children				Total
	Full time		Part time		
0-1 substitutes	75	(15)	147	(29)	222
2-6 substitutes	252	(50)	51	(10)	303

The results showed that the number of substitute persons was related to the goal structure as well as social group constellation and language. In groups with two or more substitute persons the children more often spent their time in activities with loose goal structure ($F= 4.74$, $p < .05$). In these groups the children often took the initiative on their own, there was more free play compared to groups with few substitute persons. In these there were more goal oriented activities ($F= 2.85$, $p < .06$). More substitute persons thus implied that the pedagogical work became less structured and the children were left on their own to a greater extent. The frequencies of social play, domestic activities and passivity did not have any relationship to number of substitute persons.

Children in groups with more substitute persons also had more dialogues with each other ($F= 5.84$, $p <.01$). The children in these groups thus played more on their own but at the same time the greater amount of dialogues between the children could be interpreted as a means to structure their own play. The number of dialogues between children and adults did not vary with number of substitute persons, nor did the total amount of language interaction.

The picture of a pattern with a large amount of time spent in free play and much conversation between the children was strengthened by the findings from the analysis of the social interaction pattern. In groups with more substitute persons the children had fewer contacts with adults ($F= 7.82$, $p < .01$). This was particularly evident in parallel activity. In groups with more substitute persons there were half as many adult-led parallel activities as in groups with few substitute persons ($F= 27.33$, $p < .01$).

Children in groups with many substitute staff members also changed themes more often than children in groups with ordinary personnel, particularly during the morning sessions ($F= 8.47$, $p <.01$). This implicates that the ordinary regular morning program was substituted by free play when substitute persons took over the group.

The results show that there is a clear relationship between number of substitute staff members and the pedagogical pattern. There were fewer structured and goal oriented activities which also was shown in the sparseness of adult-led parallel activity in groups with many different substitute staff members. Children had on the whole fewer contacts with adults in these groups. On the other hand there was more free play and the children had many conversations with each other. This indicates that the children to some extent "took over" and formed their own play structure. On the other hand there was a lack of persistence as there was often a change of theme.

The results were the same for both full time and part time preschools.

CHARACTERISTIC FOR PRESCHOOL GROUPS WITH TWO OR MORE SUBSTITUTE STAFF MEMBERS

More loose goal structure (free play)
More dialogues between children
Less contact with adults
More change of play themes

CHILD OBSERVATIONS AND MALE MEMBERS OF THE STAFF

Male members on the staff in preschools is a quite new situation. By tradition preschool is a world of women. From developmental point of view men are assumed to have great importance for both boys´ and girls´ identification process. During the last years there has been a governmental policy in Sweden to get more men interested in preschool teaching as a profession. In order to increase the number of men in preschool training men were accepted on a quota system for some period. Now about 5 % of the personnel in preschools are men which is the same as in this study.

What effects could be expected from the inclusion of male members on the staff?

There were few studies on this matter at the time when the present study was made. Today we know a little more, perhaps. One of the reson for the sparseness of such studies is the lack of men on the preschool staff.

In the present study there were 35 establishments with a male member on the staff. In 17 of these, a man worked in the observed group.

In 6 part time preschools a man was on the staff but in only 4 groups a man worked with the children.

Comparisons are made between preschool groups in establishments that had at least one male staff member, even if this man did not always work in the studied group, and preschools without any man working in the establishment. Still we judged the comparisons to be relevant as all children in preschools with men saw them working with children and thus were models for the teaching profession. Besides, as the personnel cooperate a great deal the men influence the work on the planning level.

The results show that there was no general relationship between the activity pattern and the fact that there was a male member on the staff. On the other hand we found different relations between children and adults in full time and part time preschools when there was a man around.

In full time preschools with the presence of a male member on the staff the children played more by themselves while the opposite was true for part time preschools. The difference was significant on a .01 level. This finding was supported by the result that there were fewer dialogues between children and adults in full time preschools with a man among the personnel while the opposite was true for part time preschools ($p < .01$) in which the children also tended to be more active.

The results thus show that in full time preschools there is LESS interaction between children and adults and in part time preschools MORE interaction when there is a male member on the staff.

These results are difficult to interprete. On the whole girls talked more and had more contact with the personnel in full time preschools while boys talked more and got more attention in part time preschools. This pattern thus seems to be changed when there are men on the staff.

A far fetched explanation could be that it would take more time for a man to be integrated into full time preschools as these are more "caring" environments. In part time preschools it is easier for a man to get integrated into a more traditional school like pattern.

There were also more domestic activities in both kinds of preschool when there was a man present. From experience it has been noted that the presence of a man often leads to higher role differentiation, that is, women do the traditional caring duties while men spend more time in educational activities.

CHARACTERISTICS OF THE ACTIVITY PATTERN IN PRESCHOOLS WITH MALE MEMBERS ON THE STAFF

Full time	Part time preschools
Less interaction with the adults	More interaction with the adults
Fewer dialogues with adults	More dialogues with the adults
	Less passive behaviour
	More domestic activities

CHILD OBSERVATIONS AND IN-SERVICE TRAINING

As reported in Chapter 3. information was obtained on the number of days that the employees had spent on further education and in-service training. It can be assumed that more training of the personnel will result in a more competent job. In order to get a measure on the amount of training the preschools were divided into groups where in-service training had been arranged during the year before the study and preschools where no such training had been arranged.

TABLE 5:10 Number of children in preschools with and without in-service training. (Number of preschools in parenthesis)

	Number of children				Total
	Full time		Part time		
In-service training	185	(37)	140	(28)	325
No in-service train.	156	(31)	58	(12)	214

The results show that there were no relationships between in-service training and the activity pattern. On the average there was more social play and more dialogues between children in groups where in-service training had been arranged. The arrangement of in-service training may thus rather be an effect of the realization that the pedagogical structure had to be tightened up in these preschools. In the early 80ies the National Board of Social Welfare emphasized the pedagogical function of the preschool in contrast to the recommendations during the 70ies. At that time the socialization aspect of preschool education was heavily emphasized.

SUMMARY

The function of the preschool

The comparisons between preschools in areas with different degrees of urbanization were based on the assumption that the expansion of preschools in a municipality reflects its function in child care. Indirectly this may be related to the circumstance that in areas where the parents´need for child care primarily is not very well provided for the preschool will have a more social function (care) than in areas where parents have the possibility to choose the kind of child care they want for their children.

The results can be interpreted in such a way that this assumption is supported. This is shown by the results that full time and part time preschools have clearly different functions in areas where the expansion is low, that is, in towns and villages.

An analysis of the social and demographic factors showed that the part time preschool in towns were characterized by middle class values. Almost half of them were situated in high status areas, none was situated in an area with more social problems, there were few children registered as social priority cases, the number of substitute teachers and nurses were low as well as the turnover of ordinary personnel. In the group of children there were mainly 6 year olds. In the towns the activities in the part time preschool were traditional preschool activities. The children were active in educational tasks like painting, drawing, puzzles, weaving etc. There was significantly less free play than than in part time groups in other areas. The children were rather silent and talked to each other more in monologue than in dialogue form. Tasks were often performed without interaction with an adult. The children did much of the work on their own or in small groups. In this matter the form of the work is similar to that in the school. Especially during the morning session there were few changes of theme which implicates that in many preschools the activities were well planned. Gathering time was important.

Full time preschools in towns had much free play and social interaction. The children changed theme often which implicates that the work was not particularly directed or structured. They also played a great deal without contact with an adult and talked much with each other, often in the form of dialogue.

Most of the full time preschools in towns were situated in areas with few social problems just like the part time preschools. Only a few were situated in areas with many problems. Most them had children in mixed ages from 1 to 6 or even 10 years old. There were on the average 3 children registered part time and somewhat fewer priority children than in the city districts.

The children in the full time groups seemed to be recruited from families that did not differ as to social background from the families whose children went to part time preschools. The number of priority children was lower than average. The social background of the children is no explanation of the differences.

The results can be interpreted as a result of differences in provision of places. In areas with low provision of places the different functions of full time and part time preschool is accentuated. Only those families in high need of a full time place will get one. The caring function is thus emphasized. The part time preschool is used by the families that has arranged child care in a family home or some other way. For these families the preschool has a pedagogical function.

This tendency was also found in villages but not as clear as i towns. Both full time and part time preschools varied more in villages than in towns. The part time groups had on the average fewer children and usually only 6 year old children were in the groups.

In all full time preschools in villages there were more part time registered children. All lived outside of the neighbourhood of the preschool. The staff/child ratio was lower than in other preschools. There were more children with social priority than in towns. The pedagogical pattern was similar to that found in towns except language communication. The children talked less in the village full time preschools in villages.

The child care policy in the municipality thus has importance for the experiences children get in preschool. In the city districts the typical pedagogical pattern characterizing towns and villages was not found. In the city the preschools varied a great deal. These variations were related to special conditions like the social character of the area. These variations will be analyzed in a later part of this report.

Social problems in the area

There were few direct relations between social problem loading of the area and the children´s activities in preschool. The only difference was in the amount of domestic activity which was more frequent in problem loaded areas. According to another study made in Stockholm (FRASBO) this was interpreted as a way to control and direct the children. Domestic activity keeps the children busy and is easy to "understand". Anxious children find security in being busy with well known tasks. The domestic activities become loaded with an educational content. They are "necessary" tasks that children need to learn. To do domestic work and routine tasks do not require much planning and preparation by the personnel and the work becomes less heavy and stressing. More time can therefore be owed to the "problem children".

The results indicate that the work in full time and part time preschool was adjusted in different ways to the social conditions that characterized the children´s families. The results appeared as interactive effects. The personnel in part time preschools adjusted their working methods more actively and in a more constructive way to the social problem conditions than the personnel in full time groups.

In full time preschools the observed children (which were the oldest in the group) seemed to be neglected. In part time preschools the personnel in groups with more priority children and many social problems in the area interacted and talked with the children as a way to control the situation. The activities were not as goal oriented as in other areas. The children were busy in play and social interaction and not so much in structured activities as in other part time groups. At the same time there was less passivity like waiting, watching, etc. In groups where there were many social priority children parallel activity was common, often done under the direction of an adult. Giving children certain tasks like in domestic activities may be a way for the personnel to control the children.

In full time preschools with many "problem" children the observed children had less interaction with an adult. There were few dialogues between children and adults. The language consisted of monologues, that is, simple instructions and statements that did not lead to a conversation.

These results may partly be explained by the fact that full time preschools in "difficult" areas had more full time registered children than average. The staff/child ratio was low in many of these preschools. There was also few opportunities for in-service training. Thus there were fewer resources than in other preschools. The lack of resources in these areas thus influences the developmental possibilities of the children. Their preschool environment lacks the pedagogical structure and interaction with staff members that are typical for the less problematic areas. This can be seen in relation to the child care policy in Stockholm where more resources are spent on preschools in problem areas than in high status areas.

The age composition and size of the children´s groups

The size and age composition of the groups were primarily related to the language communication and the frequency of social play. No relationships were found to educational activities like goal orientation. The comparisons were mainly done between full time groups.

The greater group size the more did the children talk to each other. In big groups the children had long conversations, the language was developing for the the children. On the other hand there were fewer dialogues with adults. More dialogues between children were also found in groups with greater age mixture, particularly in groups with children between 1 and 10. In these there were also much conversation between children and adults. The presence of the older children thus seemed to stimulate language production. At the same time there was less goal oriented activity in these expanded sibling groups.

The bigger the groups size the more social play was found. This was also connected to greater age mixture among the children and with the number of part time registered children. In big groups the contacts with the adults were fewer. Both in group and parallel activities there was less interaction with adults. The fewer children in the group the more often the adults were in direct contact with the children.

Although there was a higher amount of social play in big groups there was also a great deal of passivity among children in these. Direction by adults was less such as domestic activity. These kinds of activities are often directed by adults.

In part time groups with up to 20 children the adult direction in the form of task oriented activities increased. These were often done with the children working parallel under the direction of an adult. In full time groups we found fewer goal oriented activities the larger the group.

Full time and part time preschools thus solved organizational difficulties such as large group sizes and greater age mixture in different ways. In part time groups the structure was strengthened and the direction of activities more marked the more children in the group. In full time groups the children were more often left to play by themselves in similar conditions. This can be interpreted as a difference in educational attitude. In part time preschool with a stronger educational tradition the personnel strengthened the pedagogical structure as a strategy in order to manage the big group. This strategy was not used in full time preschools. In these the goal orientation and concentration on educational tasks became less emphasized. The children were more referred to each other.

The working conditions of the staff

By working conditions is here meant staff/child ratio, turnover of personnel and opportunities for in-service training.

The working conditions of the personnel was primarily reflected in the communication with the children and the social contact pattern. No relationships were found between working conditions and pedagogical activity in this analysis.

Staff/child ratio was related to amount of communication and interaction between children and personnel. The higher the ratio the more dialogues were found between children and adults. Children in full time preschools talked more generally the more adults per child. This may seem natural as the number of opportunities for conversation increases the more adults there are in the group. The time for developing conversation also increases the more adults per child. In part time groups with high staff/child ratio this effect was only found for adult/child conversation and not for child/child conversation.

The amount of social interaction was also increased the higher the staff/child ratio. Children in groups with many adults were active together with adults both in small group and parallel play. This may seem to be a natural ecological relationship but is not self-evident. A big group of personnel may have problems cooperating in an effective way. This may take time from the work with the children.

Many different substitute personnel primarily led to a looser goal structure. The children played more without the direction of adults. There was more child initiated play and fewer goal directed activities. The children had however more dialogues with each other. Parallel activities decreased a substantial amount. This pattern was the same in full time and part time preschools.

Many different substitute personnel thus led to decreased direction of activities and free play took over. This led to more discussions among the children. When several new adults who do not know the children enter the group both available material and earlier experiences seem to take over a steering function. The group of children take over the directing function through self initiated activity. The observations indicate that self direction grows through discussion between the children. An analysis of this hypothesis is an interesting research problem.

In-service training was related to the lack of a firm pedagogical structure in the full time preschool. In these there was found much social play and the children were more language active than in other preschools. On the other hand the opposite was true for the part time preschools in which it was found that more in-service training was related to a lower amount of language communication between the children.

This result indicates that in preschools that lack a firm goal orientation resources are spent on in-service training. This may be a sign of need for increased knowledge of better working methods among the personnel.

Male staff members

Generally the presence of male staff members in full time preschools was related to an increase of domestic activity and a decrease of passive behaviour. Men in preschools thus seemed to adjust to a "care" and play pattern. Children were more active, particularly in social play, in preschools with men. This was specially true for full time preschools. No relationship was found to type of pedagogical activity which could have been expected. The presence of male personnel did not effect the degree of goal structure.

Male members of the staff had different effects in full time and part time preschools regarding language communication. In full time preschools there was less interaction and fewer dialogues between children and adults when there was a man working in the preschool compared to a totally female staff.

In part time groups the situation was the opposite. More contact and language communication between children and adults characterized the group work when there was a male member on the staff.

In full time groups there are more staff members. A man is often alone among many women. It may be more difficult to cooperate than in a part time preschool where there is just one more teacher. This may be an explanation of the decrease in contact between children and adults in full time preschools with male members on the staff.

In part time groups the cooperation is usually not as problematic as in some full time groups. Teachers and nurses or assistants have more clearly defined roles by tradition in part time preschools. The role functions are marked. Men in part time preschools could be expected to get a more clear educational role or function in relation to the children than in full time preschools. This may lead to the fact that the amount of communication between children and adults increased and the children were stimulated to be active. The type of activity was not influenced, however, as stated earlier.

The results are generally interpreted in a way that shows that the function of two kinds of preschool co-varies with organizational and social background factors. Full time and part time preschools solve problems that arouse in the ecological system through mechanisms that are connected to the function of the preschool. Full time preschools respond to increased "system stress" by accentuating their caring function while part time preschools strengthen their pedagogical function. Their different kinds of reaction reflect the tradition of the two kinds of preschool. The different functions of full time and part time preschools were particularly evident in towns and villages. The pattern of adjustment showed that the function of the two forms of preschool was connected to different structural conditions.

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